

# SMCJ160CA TVS Diodes SCOAY SMCJ ESD Suppressors Surface Mount

Shenzhen, Guangdong, China

UL,REACH,RoHS,ISO

SOCAY

tape reel

1000000pcs

SMCJ160CA

# **Basic Information**

- Place of Origin:
- Brand Name:
- Certification:
- Model Number:
- Minimum Order Quantity: 3000PCS
- Price: Negotiable
- Packaging Details:
- Delivery Time: 5-8 work days
- Supply Ability:

# SOCAY®



# **Product Specification**

• Name:	TVS Diodes
<ul> <li>SMCJ160CA Package Type:</li> </ul>	DO-214AB/SMC
• Vrwm:	160V
• Vbr@It (Min.):	178V
• Vbr@lt (Max.):	197V
Product It:	1mA
<ul> <li>Vc@lpp:</li> </ul>	259V
<ul> <li>SMCJ160CA Storage Temperature Range:</li> </ul>	-55 To +150
Highlight:	SMCJ160CA TVS Diodes, SMCJ TVS Diodes, ESD Suppressors

### SMCJ160CA TVS Diodes SCOAY SMCJ ESD Suppressors Surface Mount

## SMCJ160CA TVS Diodes DATASHEET: SMCJ\_v2107.1.pdf

# SMCJ160CA TVS Diode Illustration:

SMCJ160CA TVS Diode is used in Telecom, Computer, Industrial and Consumer electronic applications, is ideal for the protection of I/O interfaces,  $V_{CC}$  bus and other vulnerable circuits. The SMCJ160CA TVS Diode is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

## SMCJ160CA TVS Diode Features:

TVS Diode is For surface mounted applications in order to optimize board space

SMCJ160CA has Low leakage

This TVS Diode is a Bidirectional unit

SMCJ160CA TVS Diode is Glass passivated junction

TVS Diode has Low inductance

SMCJ160CA TVS Diode has Excellent clamping capability

SMCJ160CA TVS Diode 's Peak power capability at 10 × 1000µs waveform Repetition rate (duty cycle):0.01% is 1500W Its Fast response time: typically less than 1.0ps from 0 Volts to VBR min

SOCAY TVS Diode 's Typical IR less than 5µA above 12V.

High Temperature soldering: 260°C/40 seconds at terminals

SMCJ160CA TVS Diode 's Typical maximum temperature coefficient ΔVBR = 0.1% × VBR@25°C× ΔT

Plastic package has Underwriters Laboratory Flammability 94V-0

Matte tin lead-free Plated

SMCJ160CA TVS Diode has Halogen free and RoHS compliant

Typical failure mode is short from over-specified voltage or current

Whisker test is conducted based on JEDEC JESD201A per its table 4a and 4c

IEC-61000-4-2 ESD 15kV(Air), 8kV (Contact)

SOCAY SMD TVS' ESD protection of data lines in accordance with IEC 61000-4-2 (IEC801-2)

EFT protection of data lines in accordance with IEC 61000-4-4 (IEC801-4)

Product Number	Part	SMCJ1600 Marking	CA TVS	Stand-Off Voltage VRWM	TVS Breako Voltag (V) @IT	e VBR	Test Current	TVS Maximum Clamping Voltage VC	Maximum Peak Pulse Current IPP	SMD TVS Maximum Reverse Leakage IR @VRWM (µA)
Uni	Bi	Uni	Bi		MIN	MAX				
SMCJ16 0A	SMCJ160 CA	GHP	внр	160.0	178.0 0	197.0 0	1	259.0	5.79	5

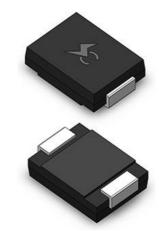
Part N	lumber	Mari	king	Reverse Stand-Off	Voltage	down V <sub>BR</sub> (V) ≬I <sub>T</sub>	Test Current	Maximum Clamping	Maximum Peak	Maximu Revers
Uni	Bi	Uni	Bi	Voltage V <sub>RWM</sub> (V)	MIN	мах	IT (mA)	Voltage Vc @Ipp (V)	Pulse Current Ipp (A)	Leakage @Vrw (μA)
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	5.0	6.40	7.00	10	9.2	163.04	1000
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	6.0	6.67	7.37	10	10.3	145.63	1000
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	6.5	7.22	7.98	10	11.2	133.93	500
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	7.0	7.78	8.60	10	12.0	125.00	200
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	7.5	8.33	9.21	1	12.9	116.28	100
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	8.0	8.89	9.83	1	13.6	110.29	50
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	8.5	9.44	10.40	1	14.4	104.17	20
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	9.0	10.00	11.10	1	15.4	97.40	10
SMCJ10A	SMCJ10CA	GDX	BDX	10.0	11.10	12.30	1	17.0	88.24	5
SMCJ11A	SMCJ11CA	GDZ	BDZ	11.0	12.20	13.50	1	18.2	82.42	5
SMCJ12A	SMCJ12CA	GEE	BEE	12.0	13.30	14.70	1	19.9	75.38	5
SMCJ13A	SMCJ13CA	GEG	BEG	13.0	14.40	15.90	1	21.5	69.77	5
SMCJ14A	SMCJ14CA	GEK	BEK	14.0	15.60	17.20	1	23.2	64.66	5
SMCJ15A	SMCJ15CA	GEM	BEM	15.0	16.70	18.50	1	24.4	61.48	5
SMCJ16A	SMCJ16CA	GEP	BEP	16.0	17.80	19.70	1	26.0	57.69	5
SMCJ17A	SMCJ17CA	GER	BER	17.0	18.90	20.90	1	27.6	54.35	5
SMCJ18A	SMCJ18CA	GET	BET	18.0	20.00	22.10	1	29.2	51.37	5
SMCJ19A	SMCJ19CA	GEB	BEB	19.0	21.10	23.30	1	30.8	48.73	5
SMCJ20A	SMCJ20CA	GEV	BEV	20.0	22.20	24.50	1	32.4	46.30	5
SMCJ22A	SMCJ22CA	GEX	BEX	22.0	24.40	26.90	1	35.5	42.25	5
SMCJ24A	SMCJ24CA	GEZ	BEZ	24.0	26.70	29.50	1	38.9	38.56	5
SMCJ26A	SMCJ26CA	GFE	BFE	26.0	28.90	31.90	1	42.1	35.63	5
SMCJ28A	SMCJ28CA	GFG	BFG	28.0	31.10	34.40	1	45.4	33.04	5
SMCJ30A	SMCJ30CA	GFK	BFK	30.0	33.30	36.80	1	48.4	30.99	5
SMCJ33A	SMCJ33CA	GFM	BFM	33.0	36.70	40.60	1	53.3	28.14	5
SMCJ36A	SMCJ36CA	GFP	BFP	36.0	40.00	44.20	1	58.1	25.82	5
SMCJ40A	SMCJ40CA	GFR	BFR	40.0	44.40	49.10	1	64.5	23.26	5
						10.10				
SMCJ43A	SMCJ43CA	GFT	BFT	43.0	47.80	52.80	1	69.4	21.61	5
	SMCJ43CA	GFT Mari		43.0 Reverse Stand-Off Voltage	Break	52.80 down Ver (V)	Test Current It	Maximum Clamping Voltage	Maximum Peak Pulse	Maximu Revers Leakage
Part N Uni	umber Bi	Marl Uni	king Bi	43.0 Reverse Stand-Off Voltage VRWM (V)	Break Voltage Ø	52.80 V <sub>BR</sub> (V) HT MAX	Test Current It (mA)	Maximum Clamping Voltage Vc @ler (V)	Maximum Peak Pulse Current Irr (A)	Maximu Revers Leakage @Vrws (μΑ)
Part N Uni SMCJ45A	umber Bi SMCJ45CA	Mart Uni GFV	king Bi BFV	43.0 Reverse Stand-Off Voltage VRWM (V) 45.0	Break Voltage MIN 50.00	52.80 down Vea (V) HT MAX 55.30	Test Current It (mA) 1	Maximum Clamping Voltage Vc @ler (V) 72.7	Maximum Peak Pulse Current Irr (A) 20.63	Maximu Revers Leakage @Vrws (μΑ) 5
Part N Uni SMCJ45A SMCJ48A	umber Bi SMCJ45CA SMCJ48CA	Mari Uni GFV GFX	king Bi BFV BFX	43.0 Reverse Stand-Off Voltage Vriviki (V) 45.0 48.0	Break Voltage MIN 50.00 53.30	52.80 to wn Ver MAX 55.30 58.90	Test Current Hr (mA) 1	Maximum Clamping Voltage Vc @l++ (V) 72.7 77.4	Maximum Peak Puise Current Ire (A) 20.63 19.38	Maximu Revers Leakage @Vrm (μΑ) 5
Part N Uni SMCJ45A SMCJ48A SMCJ51A	umber Bi SMCJ45CA SMCJ48CA SMCJ51CA	Mari Uni GFV GFX GFZ	king Bi BFV BFX BFZ	43.0 Reverse Stand-Off Voitage VRVM (V) 45.0 48.0 51.0	Break Voltage (2) MIN 50.00 53.30 56.70	52.80 Vex (V) hτ MAX 55.30 58.90 62.70	Test Current Hr (mA) 1 1 1	Maximum Clamping Voltage Vc @ler (V) 72.7 77.4 82.4	Maximum Peak Pulse Current I++ (A) 20.63 19.38 18.20	Maximu Revers Leakage @Vrm (μA) 5 5 5
Part N Uni SMCJ45A SMCJ48A SMCJ51A SMCJ54A	Bi SMCJ45CA SMCJ48CA SMCJ51CA SMCJ51CA	Mari Uni GFV GFX GFZ GGE	king Bi BFV BFX BFZ BGE	43.0 Reverse Stand-Off Voltage Vrevsk (V) 45.0 48.0 51.0 54.0	Break Voltage MIN 50.00 53.30 56.70 60.00	52.80 Vex (V) hr MAX 55.30 58.90 62.70 66.30	Test Current Hr (mA) 1	Maximum Clamping Vottage Vc @ler (V) 72.7 77.4 82.4 87.1	Maximum Peak Puise Current I≠ (A)           20.63           19.38           18.20           17.22	Maximu Revers Leakage @Vrw (μA) 5 5 5 5
Part N SMCJ45A SMCJ48A SMCJ51A SMCJ54A SMCJ58A	BI SMCJ45CA SMCJ48CA SMCJ51CA SMCJ51CA SMCJ58CA	Mari Uni GFV GFX GFZ GGE GGG	king Bi BFV BFX BFZ BGE BGG	43.0 Reverse Stand-Off Voltage Vnvvk (V) 45.0 48.0 51.0 54.0 58.0	Break Voltage (2) MIN 50.00 53.30 56.70 60.00 64.40	52.80 down Ven (V) HT 55.30 58.90 62.70 66.30 71.20	Test Current Hr (mA) 1 1 1 1 1 1	Maximum Clamping Vottage Vc @ler (V) 72.7 77.4 82.4 87.1 93.6	Maximum Peak Pulse Current I++ (A) 20.63 19.38 18.20 17.22 16.03	Maximu Revers Leakage @Vmm (µA) 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ45A SMCJ51A SMCJ51A SMCJ54A SMCJ58A SMCJ60A	BI SMCJ45CA SMCJ48CA SMCJ61CA SMCJ54CA SMCJ58CA SMCJ60CA	Mart Uni GFV GFX GFZ GGE GGG GGG	king Bi BFV BFX BFZ BGE BGG BGK	43.0 Reverse Stand-Off Voltage Vrevsk (V) 45.0 48.0 51.0 54.0 58.0 60.0	Break Voltage MIN 50.00 53.30 56.70 60.00 64.40 66.70	52.80 down Ver (V) HT MAX 55.30 58.90 62.70 66.30 71.20 73.70	Test Current Hr (mA) 1 1 1 1 1 1 1 1 1 1	Maximum Clamping Voltage Vc @l+e(V) 72.7 77.4 82.4 87.1 93.6 96.8	Maximum Peak Puise Current I≠ (A) 20.63 19.38 18.20 17.22 16.03 15.50	Maximu Revers Leakage (VAW) 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ48A SMCJ51A SMCJ54A SMCJ58A SMCJ60A SMCJ60A	BI SMCJ45CA SMCJ45CA SMCJ48CA SMCJ54CA SMCJ54CA SMCJ58CA SMCJ64CA	Mart Uni GFV GFX GFZ GGE GGG GGK GGK	king Bi BFV BFX BFZ BGE BGG BGK BGM	43.0 Reverse Stand-Off Voltage Vanue (V) 45.0 48.0 51.0 54.0 58.0 60.0 64.0	Break Voltage (2) MIN 50.00 53.30 56.70 60.00 64.40 66.70 71.10	52.80 down Ver (V) ht MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60	Test Current Hr (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Max imum Clam ping Votage Vc @lev (V) 72.7 77.4 82.4 87.1 93.6 96.8 103.0	Maximum Peak Pulse Current I= (A) 20.63 19.38 18.20 17.22 16.03 15.50 14.56	Maximu Revers Leakage (@Vam (µA) 5 5 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ48A SMCJ51A SMCJ54A SMCJ58A SMCJ60A SMCJ60A SMCJ64A	Bi Bi SMCJ45CA SMCJ48CA SMCJ51CA SMCJ54CA SMCJ50CA SMCJ60CA SMCJ64CA SMCJ70CA	Mari Uni GFV GFZ GGE GGG GGK GGM GGP	king Bi BFV BFX BFZ BGE BGG BGK BGM BGP	43.0 Reverse Stand-Off Voltage Vanue(V) 45.0 45.0 61.0 64.0 66.0 60.0 64.0 70.0	Break Voltage (2) MIN 50.00 53.30 56.70 60.00 64.40 66.70 71.10 77.80	52.80           down Vas         (V)           MAX         55.30           58.90         62.70           66.30         71.20           73.70         78.60           86.00         86.00	Test Current /r /(mA) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Maximum Clamping           Voltage           Vc           Vc           72.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0	Maximum Peak           Puise           Current           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27	Maximu Revers Leakage @Vrm (µA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ45A SMCJ51A SMCJ54A SMCJ56A SMCJ60A SMCJ60A SMCJ70A SMCJ70A	Bi Bi SMCJ45CA SMCJ45CA SMCJ54CA SMCJ54CA SMCJ58CA SMCJ60CA SMCJ64CA SMCJ70CA SMCJ76CA	Mari GFV GFX GGE GGG GGK GGM GGP GGR	Bi BFV BFX BFZ BGE BGG BGK BGM BGP BGR	43.0 Reverse Stand-Off Voltage Voltage Vorev(V) 45.0 45.0 64.0 58.0 60.0 64.0 70.0 75.0	Break Voltage (2) MIN 50.00 53.30 56.70 60.00 64.40 66.70 71.10 77.80 83.30	52.80           down           Vas           (V)           MAX           55.30           58.90           62.70           66.30           71.20           73.70           78.60           86.00           92.10	Test Current Image: Image: I	Maximum Clamping           Voltage           Vc           Vc           %br	Maximum Peak           Pairent           Current           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40	Maximu Revense (μ2Vmm (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ45A SMCJ51A SMCJ54A SMCJ58A SMCJ60A SMCJ60A SMCJ60A SMCJ70A SMCJ75A	BI SMCJ45CA SMCJ45CA SMCJ48CA SMCJ54CA SMCJ54CA SMCJ60CA SMCJ60CA SMCJ60CA SMCJ70CA SMCJ75CA SMCJ78CA	Mari GFV GFX GFZ GGE GGG GGK GGM GGP GGR GGT	King Bi BFV BFX BFZ BGE BGG BGK BGM BGP BGR BGT	43.0 Reverse Stand-Of Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Volta	Break           Voltage         Q           MIN         50.00           53.30         56.70           60.00         64.40           66.70         71.10           77.80         83.30           86.70	52.80           down           Vas           (V)           MAX           55.30           58.90           62.70           66.30           71.20           73.70           78.60           86.00           92.10           95.80	Test Current Ir (mA) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Maximum Clamping           Vitage           Vc           Qter           V           36           96.8           103.0           113.0           121.0           126.0	Maximum Peak Puise           Current br (A)           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.90	Maximu Revense (@Vnm (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ45A SMCJ54A SMCJ54A SMCJ58A SMCJ60A SMCJ60A SMCJ70A SMCJ70A SMCJ78A SMCJ78A	UIIIIber BI SMCJ45CA SMCJ45CA SMCJ54CA SMCJ54CA SMCJ60CA SMCJ60CA SMCJ60CA SMCJ75CA SMCJ78CA SMCJ80CA	Uni GFV GFX GFZ GGE GGG GGK GGM GGP GGR GGT GGB	king Bi BFV BFX BFZ BGE BGE BGR BGR BGR BGR BGT BGB	43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Voltage Volt	Break           Voltage         Q           MIN         50.00           53.30         56.70           60.00         64.40           66.70         71.10           77.80         83.30           86.70         88.80	52.80           down           Vas           55.30           55.30           62.70           66.30           71.20           73.70           78.60           86.00           92.10           95.80           97.60	Test Current Ir (mA) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Maximum Clamping Vicage           Vc           Vc           72.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           126.0           129.6	Maximum Peak Pulse           Current br (A)           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.57	Maximu Revers Leakage (ΨVmm (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N MCJ45A SMCJ45A SMCJ51A SMCJ51A SMCJ54A SMCJ58A SMCJ60A SMCJ60A SMCJ70A SMCJ70A SMCJ70A SMCJ70A SMCJ70A SMCJ70A	UIIIIber BI SMCJ45CA SMCJ45CA SMCJ54CA SMCJ54CA SMCJ64CA SMCJ60CA SMCJ60CA SMCJ60CA SMCJ75CA SMCJ78CA SMCJ78CA	Uni GFV GFX GFZ GGE GGG GGK GGM GGP GGR GGT GGB GGV	king Bi BFV BFX BFZ BGE BGG BGK BGM BGP BGR BGT BGB BGV	43.0 Reverse Stand-Off Voltage Voruse(V) 45.0 45.0 61.0 64.0 68.0 60.0 64.0 70.0 75.0 78.0 80.0 85.0	Break Voltage (2) MIN 50.00 53.30 56.70 60.00 64.40 66.70 71.10 77.80 83.30 86.70 88.80 94.40	52.80 down Vae (V) MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 86.00 92.10 95.80 97.60 104.00	Test Current Ir (mA) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Maximum Clamping Voltage           Vc           Vc           72.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           126.0           129.6           137.0	Maximum Peak Pulse Current Jer (A) 20.63 19.38 18.20 17.22 16.03 15.50 14.56 13.27 12.40 11.90 11.57 10.96	Maximu Revers Leakage @Vnm (μΔ) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N SMCJ45A SMCJ45A SMCJ51A SMCJ51A SMCJ54A SMCJ64A SMCJ60A SMCJ60A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ80A	UIIIIber BI SMCJ45CA SMCJ46CA SMCJ54CA SMCJ54CA SMCJ64CA SMCJ60CA SMCJ60CA SMCJ60CA SMCJ76CA SMCJ76CA SMCJ78CA SMCJ80CA	Uni GFV GFX GFZ GGE GGG GGK GGM GGP GGR GGR GGB GGV GGX	king Bi BFV BFX BFZ BGE BGE BGG BGK BGM BGP BGR BGR BGB BGV BGX	43.0 Reverse Stand-Off Voltage Vorue (V) 45.0 48.0 51.0 54.0 58.0 60.0 64.0 70.0 75.0 76.0 80.0 85.0 90.0	Break Voltage (0) MIN 50.00 53.30 56.70 60.00 64.40 66.70 71.10 77.80 83.30 86.70 83.80 94.40 100.00	52.80 down Vae (V) MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 86.00 92.10 95.80 97.60 104.00 111.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage           Vc           Vc           72.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           128.6           137.0           146.0	Maximum Peak Pulse Current Jez (A) 20.63 19.38 18.20 17.22 16.03 15.50 14.56 13.27 12.40 11.90 11.57 10.95 10.27	Maximu Revers Leakage @Vmm (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
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Part N Uni SMCJ45A SMCJ45A SMCJ51A SMCJ54A SMCJ54A SMCJ60A SMCJ60A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ100A SMCJ100A SMCJ100A SMCJ110A SMCJ110A SMCJ110A SMCJ110A SMCJ110A	Umber Bi SMCJ45CA SMCJ45CA SMCJ51CA SMCJ51CA SMCJ50CA SMCJ60CA SMCJ60CA SMCJ60CA SMCJ76CA SMCJ76CA SMCJ76CA SMCJ70CA SMCJ70CA SMCJ100CA SMCJ100CA SMCJ100CA SMCJ110CA SMCJ110CA SMCJ110CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFX BFZ BGE BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Vorse(V) 45.0 48.0 51.0 54.0 54.0 68.0 60.0 64.0 70.0 75.0 75.0 78.0 80.0 85.0 90.0 100.0 110.0 110.0 140.0 150.0 160.0	Break           Voltage (X)           MIN           50.00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           155.00           167.00           178.00	52.80 down (V) MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 92.10 95.80 97.60 104.00 111.00 123.00 135.00 147.00 159.00 171.00 185.00 197.00	Test Current I, (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage Vc (2)tr (V) 72.7 77.4 82.4 87.1 93.6 96.8 103.0 113.0 121.0 122.0 122.0 122.6 137.0 146.0 152.0 137.0 146.0 152.0 122.6 137.0 146.0 152.0 122.6 137.0 123.0 125.0 226.8	Maximum Peak Puise           Urrent Lure(A)           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.90           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79	Maximu Revers Leakage @Vami (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ45A SMCJ45A SMCJ51A SMCJ54A SMCJ54A SMCJ56A SMCJ60A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ100A	Bi           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ51CA           SMCJ51CA           SMCJ56CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ76CA           SMCJ76CA           SMCJ78CA           SMCJ80CA           SMCJ80CA           SMCJ80CA           SMCJ100CA           SMCJ160CA           SMCJ160CA           SMCJ170CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFX BFZ BGE BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Vorse(V) 45.0 48.0 51.0 54.0 58.0 60.0 64.0 70.0 75.0 78.0 80.0 80.0 85.0 90.0 100.0 110.0 120.0 130.0 140.0 150.0 160.0 170.0 170.0 170.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	Break Voltage (X MIN 50 00 53.30 56.70 60.00 64.40 66.70 71.10 77.80 83.30 86.70 88.80 94.40 100.00 111.00 122.00 133.00 144.00 155.00 167.00 178.00 189.00	52.80 down Went (V) H MAX 55.30 58.90 62.70 66.30 71.20 73.70 73.70 73.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 135.00 147.00 159.00 171.00 159.00 171.00 197.00 209.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clamping Voltage           Y2           72.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           1226.0           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0	Maximum Peak Puise           Urrent Ire (A)           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45	Maximu Reverse Leakage @Vame (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N Uni SMCJ46A SMCJ46A SMCJ46A SMCJ51A SMCJ54A SMCJ56A SMCJ60A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ76A SMCJ100A	Bi           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ5CA           SMCJ5CA           SMCJ5CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ76CA           SMCJ78CA           SMCJ78CA           SMCJ8CA           SMCJ8CA           SMCJ100CA           SMCJ160CA           SMCJ170CA           SMCJ170CA           SMCJ180CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Vorse(V) 45.0 48.0 51.0 54.0 56.0 60.0 64.0 70.0 75.0 78.0 80.0 80.0 85.0 90.0 100.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0	Break Voltage (X MIN 50 00 53.30 56.70 60.00 64.40 66.70 71.10 77.80 83.30 86.70 88.80 94.40 100.00 111.00 122.00 133.00 144.00 155.00 167.00 178.00 189.00 201.00	52.80 down V Went (V) HAX 55.30 58.90 62.70 66.30 71.20 73.70 73.70 73.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 135.00 147.00 159.00 171.00 159.00 171.00 197.00 209.00 220.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clamping Voltage           Yc           T2.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           1226.0           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0           291.6	Maximum Peak Puise           Urrent           Urrent           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14	Maximu Revers Leakage @Vame (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N           Uni           SMCJ45A           SMCJ45A           SMCJ51A           SMCJ51A           SMCJ54A           SMCJ54A           SMCJ54A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ70A           SMCJ70A           SMCJ70A           SMCJ80A           SMCJ80A           SMCJ100A           SMCJ100A	Bi           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ5CA           SMCJ5CA           SMCJ5CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ76CA           SMCJ70CA           SMCJ78CA           SMCJ78CA           SMCJ80CA           SMCJ100CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Vorse(V) 45.0 48.0 51.0 54.0 56.0 60.0 64.0 70.0 75.0 78.0 80.0 85.0 90.0 100.0 110.0 120.0 130.0 140.0 150.0 160.0 170.0 110.0 160.0 170.0 190.0 190.0	Break Voltage (X)           MIN           50 00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           189.00           201.00           2111.00	52.80 down MAX 55.30 58.90 62.70 66.30 71.20 73.70 73.70 78.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 135.00 147.00 159.00 171.00 159.00 171.00 159.00 171.00 197.00 209.00 220.00 232.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage           Yo           22.7           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           1226.0           137.0           146.0           162.0           177.0           93.8           209.0           226.8           243.0           259.0           275.0           291.6           307.8	Maximum Peak Puise           Variation           19.38           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.87	Maximu Revers Leakage @Vame (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N           Uni           SMCJ45A           SMCJ45A           SMCJ51A           SMCJ54A           SMCJ54A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ70A           SMCJ70A           SMCJ70A           SMCJ70A           SMCJ70A           SMCJ70A           SMCJ100A           SMCJ100A	Bi           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ5CA           SMCJ5CA           SMCJ5CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ76CA           SMCJ70CA           SMCJ78CA           SMCJ80CA           SMCJ80CA           SMCJ80CA           SMCJ100CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Variation 45.0 45.0 54.0 56.0 60.0 64.0 70.0 75.0 78.0 85.0 90.0 100.0 110.0 120.0 130.0 140.0 150.0 110.0 120.0 140.0 150.0 100.0 110.0 120.0 130.0 140.0 150.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100	Break Voltage (X)           MIN           50 00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           201.00           211.00           224.00	52.80 down MAX 55.30 58.90 62.70 66.30 71.20 73.70 73.70 78.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 135.00 147.00 159.00 171.00 159.00 171.00 159.00 171.00 197.00 209.00 220.00 232.00 247.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage           Y2           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           122.6           137.0           146.0           162.0           177.0           93.6           209.0           226.8           243.0           259.0           275.0           291.6           307.8           324.0	Maximum Peak Puise           Variation           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.87           4.60	Maximu Reverse Leakage @Vaww (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N           Uni           SMCJ45A           SMCJ45A           SMCJ51A           SMCJ54A           SMCJ54A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ70A           SMCJ70A           SMCJ70A           SMCJ80A           SMCJ80A           SMCJ100A           SMCJ200A           SMCJ200A	Bi           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ5CA           SMCJ5CA           SMCJ50CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ100CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Variation 45.0 45.0 54.0 54.0 56.0 60.0 64.0 70.0 75.0 78.0 80.0 75.0 78.0 80.0 100.0 110.0 120.0 110.0 120.0 130.0 140.0 150.0 100.0 110.0 120.0 130.0 140.0 150.0 100.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0 120.0	Break Voltage (X)           MIN           50.00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           201.00           211.00           224.00           246.00	52.80 52.80 MAX 55.30 58.90 62.70 66.30 71.20 73.70 73.70 78.60 92.10 95.80 92.10 95.80 92.10 104.00 111.00 123.00 135.00 147.00 159.00 147.00 159.00 171.00 159.00 147.00 209.00 220.00 232.00 247.00 272.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage           Y2           77.4           82.4           87.1           93.6           96.8           103.0           113.0           121.0           1226.0           137.0           162.0           177.0           193.0           226.8           243.0           226.8           243.0           275.0           307.8           324.0           356.0	Maximum Peak Puise           Part           Vire(A)           20.63           19.38           18.20           17.22           16.03           15.50           14.56           13.27           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.87           4.60           4.20	Maximu Reverse Leakage @Vaw(μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N           Uni           SMCJ45A           SMCJ45A           SMCJ51A           SMCJ54A           SMCJ54A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ70A           SMCJ70A           SMCJ80A           SMCJ80A           SMCJ100A           SMCJ200A           SMCJ200A	Bi           SMCJ45CA           SMCJ45CA           SMCJ46CA           SMCJ46CA           SMCJ51CA           SMCJ50CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ80CA           SMCJ100CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA <td>Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR</td> <td>king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR</td> <td>43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Vasue (V) 45.0 64.0 66.0 66.0 66.0 64.0 70.0 75.0 78.0 80.0 85.0 90.0 100.0 110.0 110.0 120.0 130.0 140.0 150.0 140.0 110.0 120.0 130.0 140.0 140.0 120.0 120.0 120.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190</td> <td>Break Voltage (X)           MIN           50.00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           201.00           211.00           224.00           245.00           279.00</td> <td>52.80 down MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 147.00 155.00 147.00 155.00 147.00 155.00 147.00 209.00 220.00 2232.00 2232.00 2232.00 2247.00 209.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.</td> <td>Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1</td> <td>Maximum Clam ping Voltage           Ys           72.7           77.4           82.4           87.1           93.8           96.8           103.0           113.0           121.0           128.0           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0           307.8           324.0           356.0           405.0</td> <td>Maximum Peak Puise           Part           1936           1820           17.22           16.03           15.50           14.56           1327           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.60           4.20           3.70</td> <td>Maximu Reverse Leakage @Vaw(μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td>	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Vasue (V) 45.0 64.0 66.0 66.0 66.0 64.0 70.0 75.0 78.0 80.0 85.0 90.0 100.0 110.0 110.0 120.0 130.0 140.0 150.0 140.0 110.0 120.0 130.0 140.0 140.0 120.0 120.0 120.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 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190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190	Break Voltage (X)           MIN           50.00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           201.00           211.00           224.00           245.00           279.00	52.80 down MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 147.00 155.00 147.00 155.00 147.00 155.00 147.00 209.00 220.00 2232.00 2232.00 2232.00 2247.00 209.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 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Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage           Ys           72.7           77.4           82.4           87.1           93.8           96.8           103.0           113.0           121.0           128.0           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0           307.8           324.0           356.0           405.0	Maximum Peak Puise           Part           1936           1820           17.22           16.03           15.50           14.56           1327           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.60           4.20           3.70	Maximu Reverse Leakage @Vaw(μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N           Uni           SMCJ45A           SMCJ45A           SMCJ51A           SMCJ54A           SMCJ54A           SMCJ60A           SMCJ70A           SMCJ70A           SMCJ80A           SMCJ100A           SMCJ200A           SMCJ200A           SMCJ200A           SMCJ200A           SMCJ200A	Bi           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ45CA           SMCJ5CA           SMCJ5CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ6CA           SMCJ76CA           SMCJ76CA           SMCJ78CA           SMCJ8CA           SMCJ78CA           SMCJ78CA           SMCJ100CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ300CA	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Vanue (V) 45.0 54.0 554.0 56.0 60.0 64.0 70.0 75.0 78.0 80.0 75.0 78.0 80.0 100.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 110.0 120.0 130.0 140.0 150.0 140.0 150.0 100.0 120.0 130.0 140.0 150.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.	Break Voltage (2)           MIN           50.00           53.30           56.70           60.00           64.40           66.70           71.10           77.80           83.30           86.70           83.30           86.70           88.80           94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           201.00           211.00           224.00           245.00           279.00           335.00	52.80 down MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 147.00 159.00 147.00 159.00 147.00 159.00 147.00 209.00 220.00 222.00 232.00 247.00 232.00 309.00 371.00	Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clamping Voltage           Y2           72.7           77.4           82.4           87.1           93.8           96.8           103.0           113.0           124.0           125.0           128.0           129.6           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0           307.8           324.0           356.0           405.0	Maximum Peak Puise           Part           1936           1938           1820           1722           16.03           1327           1240           11.57           10.96           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.80           4.20           3.70           3.10	Maximu Reverse Leakage @Vaww (μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Part N           Uni           SMCJ45A           SMCJ45A           SMCJ51A           SMCJ54A           SMCJ54A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ60A           SMCJ70A           SMCJ70A           SMCJ80A           SMCJ80A           SMCJ100A           SMCJ200A           SMCJ200A	Bi           SMCJ45CA           SMCJ45CA           SMCJ46CA           SMCJ46CA           SMCJ51CA           SMCJ50CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ60CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ70CA           SMCJ80CA           SMCJ100CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA           SMCJ200CA <td>Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR</td> <td>king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR</td> <td>43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Vasue (V) 45.0 64.0 66.0 66.0 66.0 64.0 70.0 75.0 78.0 80.0 85.0 90.0 100.0 110.0 110.0 120.0 130.0 140.0 150.0 140.0 110.0 120.0 130.0 140.0 140.0 120.0 120.0 120.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 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94.40           100.00           111.00           122.00           133.00           144.00           165.00           167.00           178.00           201.00           211.00           224.00           245.00           279.00</td> <td>52.80 down MAX 55.30 58.90 62.70 66.30 71.20 73.70 78.60 92.10 95.80 92.10 95.80 97.60 104.00 111.00 123.00 147.00 155.00 147.00 155.00 147.00 155.00 147.00 209.00 220.00 2232.00 2232.00 2232.00 2247.00 209.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 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200.00 200.00 200.00 200.</td> <td>Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1</td> <td>Maximum Clam ping Voltage           Ys           72.7           77.4           82.4           87.1           93.8           96.8           103.0           113.0           121.0           128.0           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0           307.8           324.0           356.0           405.0</td> <td>Maximum Peak Puise           Part           1936           1820           17.22           16.03           15.50           14.56           1327           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.60           4.20           3.70</td> <td>Maximu Reverse Leakage @Vaw(μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5</td>	Uni GFV GFZ GGE GGG GGG GGR GGR GGR GGR GGR GGR GGR	king Bi BFV BFZ BGE BGG BGK BGR BGR BGR BGR BGR BGR BGR BGR BGR BGR	43.0 Reverse Stand-Off Voltage Voltage Voltage Voltage Vasue (V) 45.0 64.0 66.0 66.0 66.0 64.0 70.0 75.0 78.0 80.0 85.0 90.0 100.0 110.0 110.0 120.0 130.0 140.0 150.0 140.0 110.0 120.0 130.0 140.0 140.0 120.0 120.0 120.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 190.0 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Test Current Ir (mA)           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1           1	Maximum Clam ping Voltage           Ys           72.7           77.4           82.4           87.1           93.8           96.8           103.0           113.0           121.0           128.0           137.0           146.0           162.0           177.0           193.0           209.0           226.8           243.0           259.0           275.0           307.8           324.0           356.0           405.0	Maximum Peak Puise           Part           1936           1820           17.22           16.03           15.50           14.56           1327           12.40           11.57           10.95           10.27           9.26           8.47           7.77           7.18           6.61           6.17           5.79           5.45           5.14           4.60           4.20           3.70	Maximu Reverse Leakage @Vaw(μA) 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

Note: 1. Suffix 'A ' denotes 5% tolerance device. 2. Add suffix' CA ' after part number to specify Bi-directional devices. 3. For Bi-Directional devices having V<sub>n</sub> of 10 volts and under, the I<sub>n</sub> limit is double.









# Description

The SMCJ series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

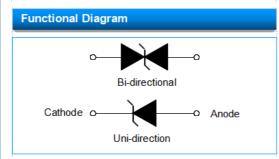
#### Features

- For surface mounted applications in order to optimize board space ٠
- ٠ Low leakage
- Uni and Bidirectional unit ٠
- Glass passivated junction ٠
- ٠ Low inductance
- Excellent clamping capability ٠
- ٠ 1500W Peak power capability at 10 × 1000µs waveform Repetition rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0 Volts to VBR min ٠
- Typical I<sub>R</sub> less than 5µA above 12V. ٠
- High Temperature soldering: 260°C/40 seconds at terminals ٠
- ٠ Typical maximum temperature coefficient  $\Delta V_{BR} = 0.1\% \times$ V<sub>BR</sub>@25°C× ∆T
- Plastic package has Underwriters Laboratory Flammability 94V-0 ٠
- Matte tin lead-free Plated
- ٠ Halogen free and RoHS compliant
- ٠ Typical failure mode is short from over-specified voltage or current
- Whisker test is conducted based on JEDEC JESD201A per its table ٠
- IEC-61000-4-2 ESD 15kV(Air), 8kV (Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2 (IEC801-2)
- EFT protection of data lines in accordance with IEC 61000-4-4 ٠ (IEC801-4)

#### Applications

4a and 4c

TVS devices are ideal for the protection of I/O interfaces, Vcc bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications .



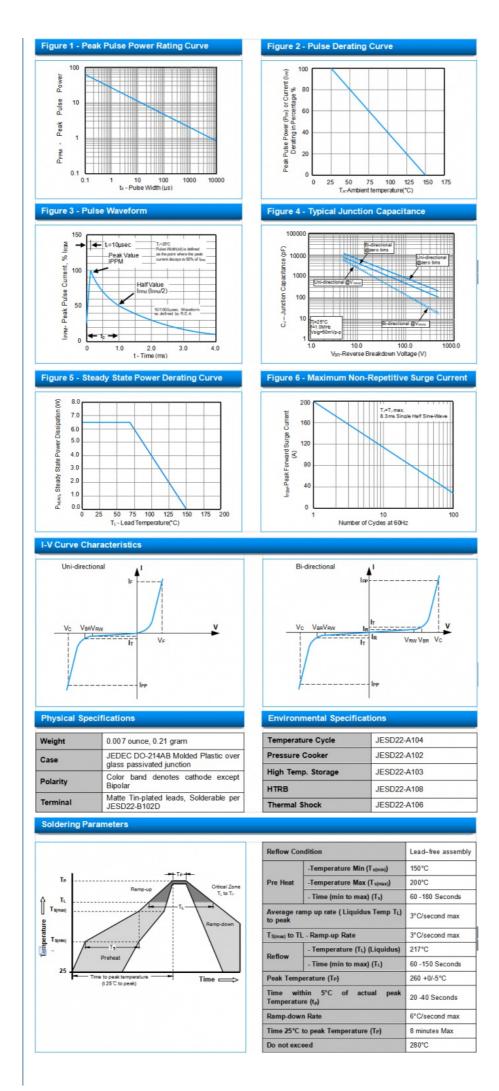
### Maximum Ratings (T\_A=25 T unless otherwise noted)

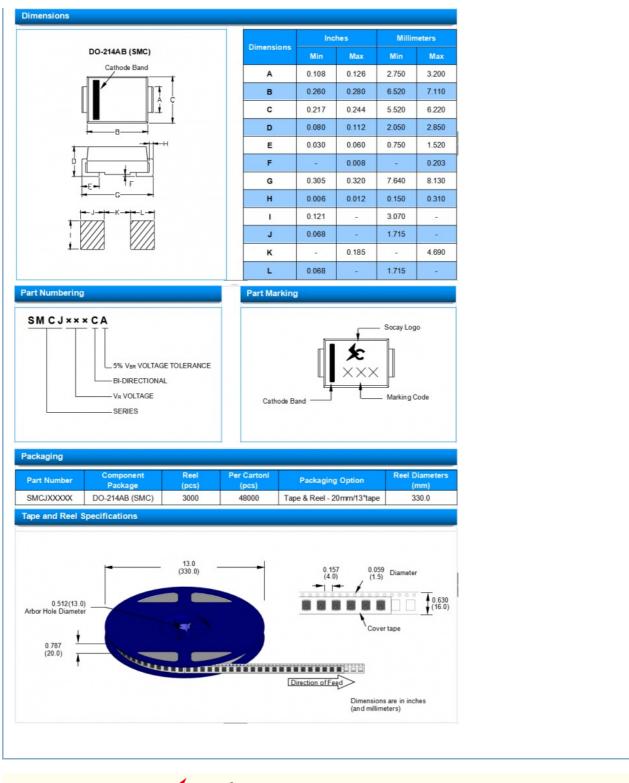
Symbol	Value	Unit
Рерм	1500	Watts
IPP	See Next Table	Amps
P <sub>M(AV)</sub>	6.5	Watt
IFSM	200	Amps
VF	3.5/5.0	Voltage
TJ. TSTG	-55 to +150	°C
	Pppm Ipp Pm(av) Ifsm Vf	Регм         1500           Iгер         See Next Table           Рмику         6.5           Iгем         200           Vr         3.5/5.0

1. Non-repetitive current pulse, per Fig. 3 and derated above  $T_{\rm A}$  = 25 C per Fig. 2.

2. Mounted on 5.0mmx 5.0mm (0.03mmthick) Copper Pads to each terminal. 3.8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

4.  $V_F$  < 3.5V for  $V_{BR}$  < 200V and  $V_F$ < 6.5V for  $V_{BR}$  > 201V.





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