

3000W Transient Voltage Suppressors


TVS Diodes - 3000W > SMDJ Series



Description

The SMDJ 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
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-0
- Typical IR less than 1uA above 10V
- Fast response time: typically less than 1.0ps from 0 Volts to VBR min
- Glass passivated junction
- Low inductance
- Agency recognition: 



Package: DO-214AB/ SMC

Applications

- I/O interface • AC/DC power supply
- Low frequency signal transmission line (RS232, RS485, etc.)

Electrical Characteristics

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10x1000µs waveform (Fig.1)(Note 1), (Note 2)	PPPM	3000	Watts
Peak pulse current of at 10/1000µs waveform (Note 1, Fig.3)	IPPM	See Table	Amps
Steady state power dissipation at TA=50°C (Fig.5)	PM(AV)	6.5	Watts
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	IFSM	3 00	Amps
Operating Junction and Storage Temperature Range	TJ, TSTG	-65 to 150	°C
Typical Thermal Resistance Junction to Lead	RθJL	15	°C/W
Typical Thermal Resistance Junction to Ambient	RθJA	75	°C/W

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig. 2.
2. Mounted on 8.0x8.0mm copper pad to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Electrical Characteristics (TA=25°C)

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V _{BR} (Volts)@I _T		Test Current	Maximum Clamping Voltage@I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}	Certification	Delivery Time
Uni-Polar	Bi-polar	V _{RWM} (V)	Min	Max	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)	UL	days
SMDJ5.0A	SMDJ5.0CA	5.0	6.40	7.00	10	9.2	326.1	800	√	7days
SMDJ6.0A	SMDJ6.0CA	6.0	6.67	7.37	10	10.3	291.3	800	√	7days
SMDJ6.5A	SMDJ6.5CA	6.5	7.22	7.98	10	11.2	267.9	500	√	7days
SMDJ7.0A	SMDJ7.0CA	7.0	7.78	8.60	10	12.0	250.0	200	√	7days
SMDJ7.5A	SMDJ7.5CA	7.5	8.33	9.21	1	12.9	232.6	100	√	7days
SMDJ8.0A	SMDJ8.0CA	8.0	8.89	9.83	1	13.6	220.6	50	√	7days
SMDJ8.5A	SMDJ8.5CA	8.5	9.44	10.40	1	14.4	208.3	20	√	7days
SMDJ9.0A	SMDJ9.0CA	9.0	10.0	11.10	1	15.4	194.8	10	√	7days
SMDJ10A	SMDJ10CA	10.0	11.1	12.3	1	17.0	176.5	5	√	7days
SMDJ11A	SMDJ11CA	11.0	12.2	13.5	1	18.2	164.8	2	√	7days
SMDJ12A	SMDJ12CA	12.0	13.3	14.7	1	19.9	150.8	2	√	7days
SMDJ13A	SMDJ13CA	13.0	14.4	15.9	1	21.5	139.5	2	√	7days
SMDJ14A	SMDJ14CA	14.0	15.6	17.2	1	23.2	129.3	2	√	7days
SMDJ15A	SMDJ15CA	15.0	16.7	18.5	1	24.4	123.0	2	√	7days
SMDJ16A	SMDJ16CA	16.0	17.8	19.7	1	26.0	115.4	2	√	7days
SMDJ17A	SMDJ17CA	17.0	18.9	20.9	1	27.6	108.7	2	√	7days
SMDJ18A	SMDJ18CA	18.0	20.0	22.1	1	29.2	102.7	2	√	7days
SMDJ20A	SMDJ20CA	20.0	22.2	24.5	1	32.4	92.6	2	√	7days
SMDJ22A	SMDJ22CA	22.0	24.4	26.9	1	35.5	84.5	2	√	7days
SMDJ24A	SMDJ24CA	24.0	26.7	29.5	1	38.9	77.1	2	√	7days
SMDJ26A	SMDJ26CA	26.0	28.9	31.9	1	42.1	71.3	2	√	7days
SMDJ28A	SMDJ28CA	28.0	31.1	34.4	1	45.4	66.1	2	√	7days
SMDJ30A	SMDJ30CA	30.0	33.3	36.8	1	48.4	62.0	2	√	7days
SMDJ33A	SMDJ33CA	33.0	36.7	40.6	1	53.3	56.3	2	√	7days

Electrical Characteristics (TA=25°C)

continued

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage		Test Current	Maximum Clamping Voltage@IPP	Peak Pulse Current	Reverse Leakage @VRWM	Certification	Delivery Time
Uni-Polar	Bi-polar	VRWM(V)	Min	Max	IT(mA)	VC(V)	IPP(A)	IR(μA)	UL	days
SMDJ36A	SMDJ36CA	36.0	40.0	44.2	1	58.1	51.6	2	√	7days
SMDJ40A	SMDJ40CA	40.0	44.4	49.1	1	64.5	46.5	2	√	7days
SMDJ43A	SMDJ43CA	43.0	47.8	52.8	1	69.4	43.2	2	√	7days
SMDJ45A	SMDJ45CA	45.0	50.0	55.3	1	72.7	41.3	2	√	7days
SMDJ48A	SMDJ48CA	48.0	53.3	58.9	1	77.4	38.8	2	√	7days
SMDJ51A	SMDJ51CA	51.0	56.7	62.7	1	82.4	36.4	2	√	7days
SMDJ54A	SMDJ54CA	54.0	60.0	66.3	1	87.1	34.4	2	√	7days
SMDJ58A	SMDJ58CA	58.0	64.4	71.2	1	93.6	32.1	2	√	7days
SMDJ60A	SMDJ60CA	60.0	66.7	73.7	1	96.8	31.0	2	√	7days
SMDJ64A	SMDJ64CA	64.0	71.1	78.6	1	103.0	29.1	2	√	7days
SMDJ70A	SMDJ70CA	70.0	77.8	86.0	1	113.0	26.5	2	√	7days
SMDJ75A	SMDJ75CA	75.0	83.3	92.1	1	121.0	24.8	2	√	7days
SMDJ78A	SMDJ78CA	78.0	86.7	95.8	1	126.0	23.8	2	√	7days
SMDJ85A	SMDJ85CA	85.0	94.4	104.0	1	137.0	21.9	2	√	7days
SMDJ90A	SMDJ90CA	90.0	100	111.0	1	146.0	20.5	2	√	7days
SMDJ100A	SMDJ100CA	100.0	111	123.0	1	162.0	18.5	2	√	7days
SMDJ110A	SMDJ110CA	110.0	122	135.0	1	177.0	16.9	2	√	7days
SMDJ120A	SMDJ120CA	120.0	133	147.0	1	193.0	15.5	2	√	7days
SMDJ130A	SMDJ130CA	130.0	144	159.0	1	209.0	14.4	2	√	7days
SMDJ150A	SMDJ150CA	150.0	167	185.0	1	243.0	12.3	2	√	7days
SMDJ160A	SMDJ160CA	160.0	178	197.0	1	259.0	11.6	2	√	7days
SMDJ170A	SMDJ170CA	170.0	189	209.0	1	275.0	10.9	2	√	7days

Notes: For bidirectional type having VRWM of 10 volts and less, the IR limit is double

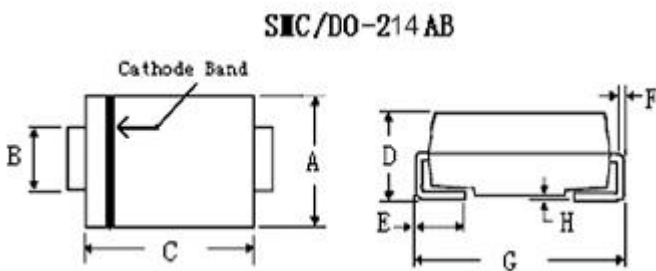
Electrical Characteristics (TA=25°C)

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V _{BR} (Volts)@IT		Test Current	Maximum Clamping Voltage@I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}	Certification	Delivery Time
Uni-Polar	Bi-polar	V _{RWM} (V)	Min	Max	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)	UL	days
SMDJ180A	SMDJ180CA	180.0	201.0	222.0	1	292.0	10.3	1	-	7days
SMDJ190A	SMDJ190CA	190.0	211.0	233.0	1	308.0	9.7	1	-	7days
SMDJ200A	SMDJ200CA	200.0	224.0	247.0	1	324.0	9.3	1	-	7days
SMDJ210A	SMDJ210CA	210.0	237.0	263.0	1	340.0	8.8	1	-	7days
SMDJ220A	SMDJ220CA	220.0	246.0	272.0	1	356.0	8.4	1	-	7days
SMDJ250A	SMDJ250CA	250.0	279.0	309.0	1	405.0	7.8	1	-	7days
SMDJ300A	SMDJ300CA	300.0	335.0	371.0	1	486.0	6.5	1	-	7days
SMDJ350A	SMDJ350CA	350.0	391.0	432.0	1	567.0	5.5	1	-	7days
SMDJ400A	SMDJ400CA	400.0	447.0	494.0	1	648.0	4.8	1	-	7days
SMDJ440A	SMDJ440CA	440.0	492.0	543.0	1	713.0	4.4	1	-	7days

Packing Options

Package Type	Description	Packing Quantity	Industry Standard
SMC	Embossed Carrier Reel Pack	3000PCS	EIA-481-1

Dimensions - DO-214AB



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.220	0.236	5.6	6.0
B	0.112	0.124	2.85	3.15
C	0.258	0.27	6.55	6.85
D	0.083	0.098	2.1	2.5
E	0.031	0.055	0.8	1.4
F	0.006	0.013	0.18	0.32
G	0.309	0.321	7.85	8.15
H		0.008		0.203