

5000W Transient Voltage Suppressors


TVS Diodes - 5000W > 5.0SMDJ Series



Description

The 5.0SMDJ 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	5000	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	300	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-Of f 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)	IR(μA)	UL	days
5.0SMDJ12A	5.0SMDJ12CA	12.0	13.3	14.7	10	19.9	252	800	√	15days
5.0SMDJ13A	5.0SMDJ13CA	13.0	14.4	15.9	10	21.5	233	500	√	15days
5.0SMDJ14A	5.0SMDJ14CA	14.0	15.6	17.2	10	23.2	216	200	√	15days
5.0SMDJ15A	5.0SMDJ15CA	15.0	16.7	18.5	1	24.4	205	100	√	15days
5.0SMDJ16A	5.0SMDJ16CA	16.0	17.8	19.7	1	26.0	193	50	√	15days
5.0SMDJ17A	5.0SMDJ17CA	17.0	18.9	20.9	1	27.6	181	20	√	15days
5.0SMDJ18A	5.0SMDJ18CA	18.0	20.0	22.1	1	29.2	172	10	√	15days
5.0SMDJ20A	5.0SMDJ20CA	20.0	22.2	24.5	1	32.4	155	5	√	15days
5.0SMDJ22A	5.0SMDJ22CA	22.0	24.4	26.9	1	35.5	141	5	√	15days
5.0SMDJ24A	5.0SMDJ24CA	24.0	26.7	29.5	1	38.9	129	2	√	15days
5.0SMDJ26A	5.0SMDJ26CA	26.0	28.9	31.9	1	42.1	119	2	√	15days
5.0SMDJ28A	5.0SMDJ28CA	28.0	31.1	34.4	1	45.4	110	2	√	15days
5.0SMDJ30A	5.0SMDJ30CA	30.0	33.3	36.8	1	48.4	103	2	√	15days
5.0SMDJ33A	5.0SMDJ33CA	33.0	36.7	40.6	1	53.3	93.9	2	√	15days
5.0SMDJ36A	5.0SMDJ36CA	36.0	40.0	44.2	1	58.1	86.1	2	√	15days
5.0SMDJ40A	5.0SMDJ40CA	40.0	44.4	49.1	1	64.5	77.6	2	√	15days
5.0SMDJ43A	5.0SMDJ43CA	43.0	47.8	52.8	1	69.4	72.1	2	√	15days
5.0SMDJ45A	5.0SMDJ45CA	45.0	50.0	55.3	1	72.7	68.8	2	√	15days
5.0SMDJ48A	5.0SMDJ48CA	48.0	53.3	58.9	1	77.4	64.7	2	√	15days
5.0SMDJ51A	5.0SMDJ51CA	51.0	56.7	62.7	1	82.4	60.7	2	√	15days
5.0SMDJ54A	5.0SMDJ54CA	54.0	60.0	66.3	1	87.1	57.5	2	√	15days
5.0SMDJ58A	5.0SMDJ58CA	58.0	64.4	71.2	1	93.6	53.5	2	√	15days
5.0SMDJ60A	5.0SMDJ60CA	60.0	66.7	73.7	1	96.8	51.7	2	√	15days

Electrical Characteristics (TA=25°C)

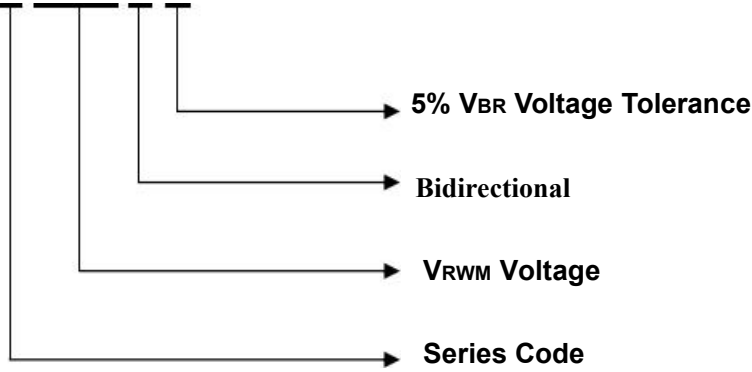
continued

Part Number		Reverse Stand-Of f 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)	IR(μA)	UL	days
5.0SMDJ64A	5.0SMDJ64CA	64.0	71.1	78.6	1	103.0	48.6	2	√	15days
5.0SMDJ70A	5.0SMDJ70CA	70.0	77.8	86.0	1	113.0	44.3	2	√	15days
5.0SMDJ75A	5.0SMDJ75CA	75.0	83.3	92.1	1	121.0	41.4	2	√	15days
5.0SMDJ78A	5.0SMDJ78CA	78.0	86.7	95.8	1	126.0	39.7	2	√	15days
5.0SMDJ85A	5.0SMDJ85CA	85.0	94.4	104	1	137.0	36.5	2	√	15days
5.0SMDJ90A	5.0SMDJ90CA	90.0	100	111	1	146.0	34.3	2	√	15days
5.0SMDJ100A	5.0SMDJ100CA	100.0	111	123	1	162.0	30.9	2	√	15days
5.0SMDJ110A	5.0SMDJ110CA	110.0	122	135	1	177.0	28.3	2	√	15days
5.0SMDJ120A	5.0SMDJ120CA	120.0	133	147	1	193.0	26.0	2	√	15days
5.0SMDJ130A	5.0SMDJ130CA	130.0	144	159	1	209.0	24.0	2	√	15days
5.0SMDJ150A	5.0SMDJ150CA	150.0	167	185	1	243.0	20.6	2	√	15days
5.0SMDJ160A	5.0SMDJ160CA	160.0	178	197	1	259.0	19.3	2	√	15days
5.0SMDJ170A	5.0SMDJ170CA	170.0	189	209	1	275.0	18.2	2	√	15days

Notes:For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double

Description of Part Number

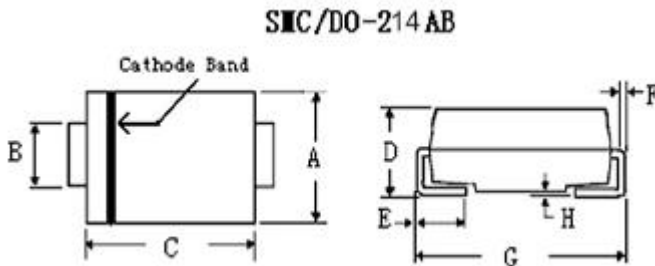
5.0SMDJ XXX C A



Packing Options

Package Type	Description	Packing Quantity	Industry Standard
DO-214AB	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