

Description

8.0SMDJ Series transient voltage suppressors are excellent overvoltage protective devices. The Series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- Excellent clamping capability
- Low leakage current
- High surge capability
- Glass passivated chip
- Epoxy resin package
- Built-in strain relief
- Will not fatigue
- RoHS Compliant
- Fast response time:
• typically less than 1.0ps from 0 Volts to VBR min

Mechanical Characteristics

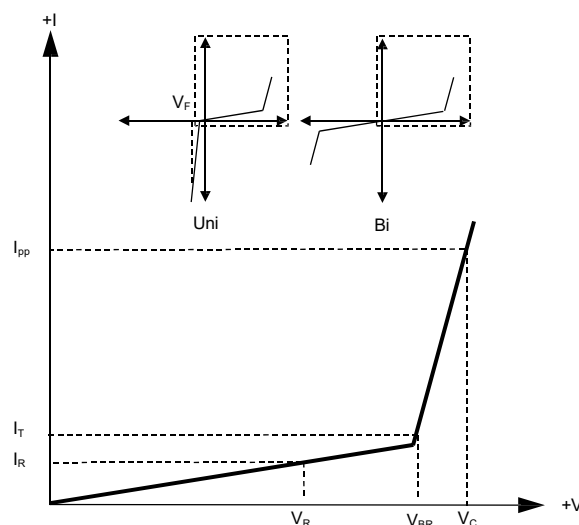
- Package: SMC plastic package.
- Lead Finish: Matte Tin
- Case Material: Epoxy Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020

Applications

- Telecom
- Computer
- Industrial electronic
- Consumer electronic

Electrical Parameters

Parameter	Definition
C_J	Junction Capacitance - typical capacitance measured with 0V or V_R bias
I_{PP}	Peak Pulse Current - maximum rated peak impulse current
V_C	Clamping Voltage - Peak voltage measured across the suppressor at a specified I_{ppm} (peak impulse current)
V_{BR}	Breakdown Voltage - Maximum voltage that flows though the TVS at a specified test current (I_T)
I_R	Leakage Current - maximum peak off-state current measured at V_R
V_R	Peak Off-state Voltage - maximum voltage that can be applied while maintaining off state



Absolute Maximum Ratings (TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Units	Remarks
Peak Pulse Power Dissipation	P _{PPM}	8000	W	(Note1)(Note2)
Steady State Power Dissipation	P _D	6.5	W	(Note3)
Peak Forward Surge Current	I _{FSM}	300	A	(Note4)
Maximum Instantaneous Forward Voltage at 100A	V _{FM}	5	V	(Note5)
Typical Thermal Resistance Junction to Lead	R _{θJL}	15	°C/W	
Typical Thermal Resistance Junction to Ambient	R _{θJA}	75	°C/W	
Operating Temperature Range	T _J	-55 to 150	°C	
Storage Temperature Range	T _{STG}	-55 to 150	°C	

Notes1: Non-repetitive current pulse , 10/1000us Waveform.

Notes2: Mounted on copper pad area of 8×8mm to each terminal.

Notes3: Infinite HeatSink at TL=50°C

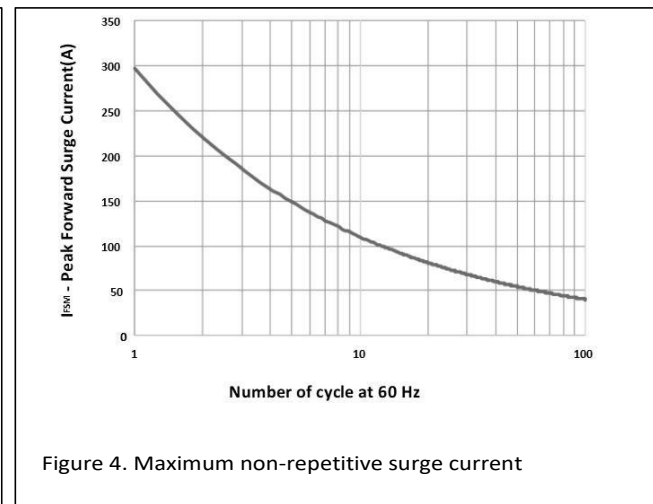
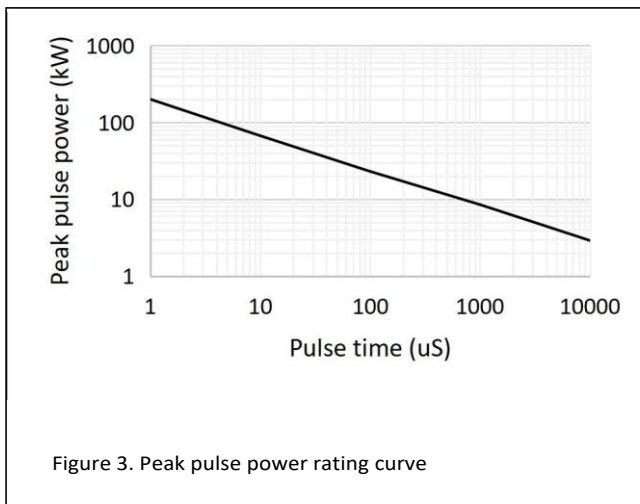
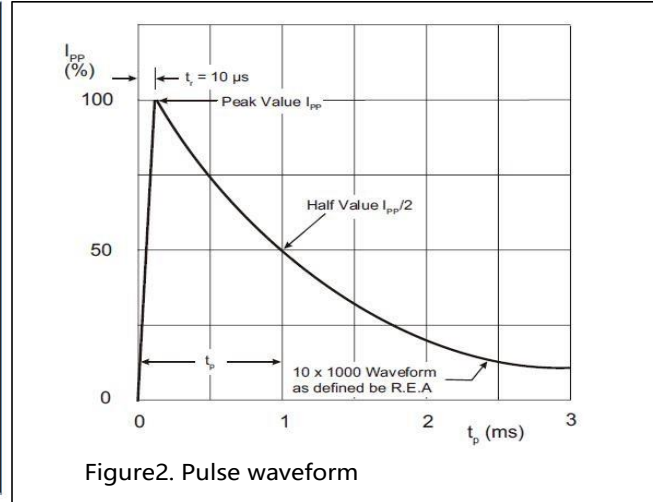
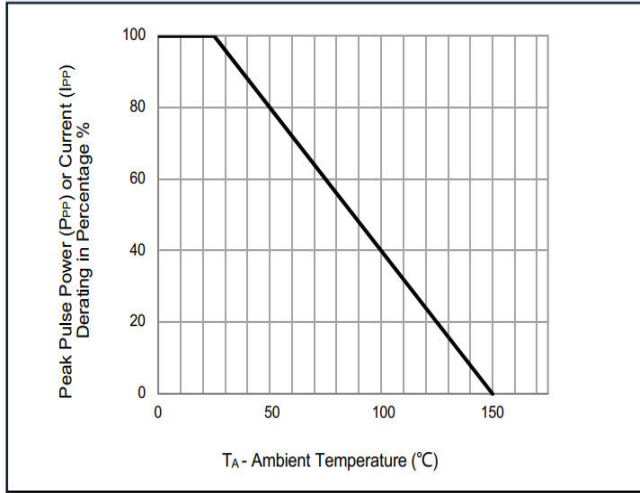
Notes4: Measured on 8.3ms single half sine wave or equivalent square wave, duty cycle=4 perminute maximum.

Notes5: For UnidirectionalOnly.

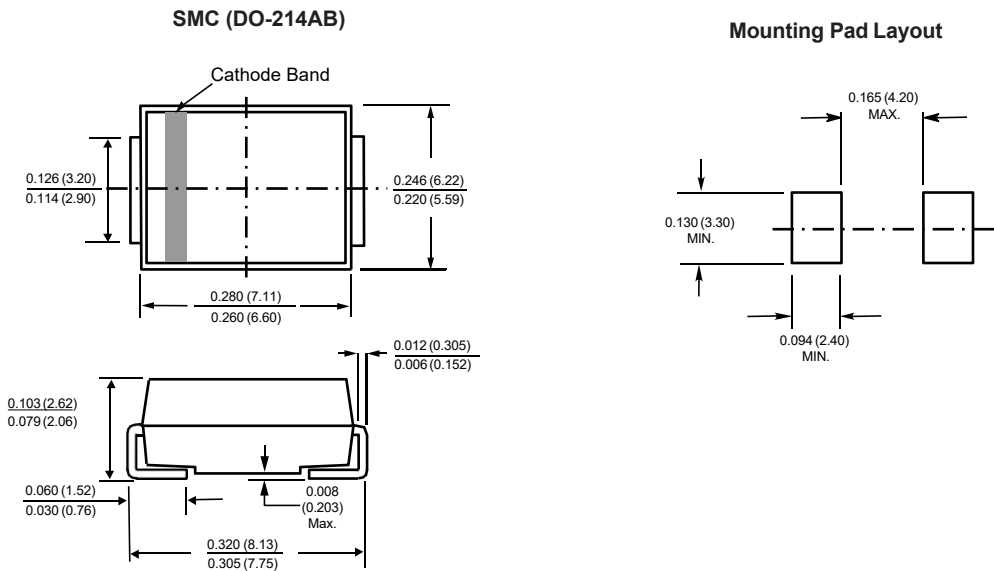
Electrical Characteristics (TA=25°C unless otherwise noted)

Part Number (Uni)	Part Number (Bi)	Marking		Reverse Standoff Voltage V (VR)	Breakdown Voltage V _{BR} (Volts) @ I _T		Test Current I _T (mA)	Maximum Clamping Voltage V _C @ I _{pp} (10/1000μs) (V)	Maximum Peak Pulse Current I _{pp} (10/1000μs) (A)	Maximum Reverse Leakage I _R @ V _R (μA)
		UNI	BI		MIN	MAX				
8.0SMDJ12A	8.0SMDJ12CA	8PEP	8BEP	12	13.3	14.7	10	19.9	402.1	800
8.0SMDJ13A	8.0SMDJ13CA	8PEQ	8BEQ	13	14.4	15.9	10	21.5	372.1	500
8.0SMDJ14A	8.0SMDJ14CA	8PER	8BER	14	15.6	17.2	10	23.2	344.9	200
8.0SMDJ15A	8.0SMDJ15CA	8PES	8BES	15	16.7	18.5	1	24.4	327.9	100
8.0SMDJ16A	8.0SMDJ16CA	8PET	8BET	16	17.8	19.7	1	26.0	307.7	50
8.0SMDJ17A	8.0SMDJ17CA	8PEU	8BEU	17	18.9	20.9	1	27.6	290.0	20
8.0SMDJ18A	8.0SMDJ18CA	8PEV	8BEV	18	20.0	22.1	1	29.2	274.0	10
8.0SMDJ20A	8.0SMDJ20CA	8PEW	8BEW	20	22.2	24.5	1	32.4	247.0	5
8.0SMDJ22A	8.0SMDJ22CA	8PEX	8BEX	22	24.4	26.9	1	35.5	225.4	5
8.0SMDJ24A	8.0SMDJ24CA	8PEZ	8BEZ	24	26.7	29.5	1	38.9	205.7	5
8.0SMDJ26A	8.0SMDJ26CA	8PFE	8BFE	26	28.9	31.9	1	42.1	190.1	5
8.0SMDJ28A	8.0SMDJ28CA	8PFG	8BFG	28	31.1	34.4	1	45.4	176.2	5
8.0SMDJ30A	8.0SMDJ30CA	8PFK	8BFK	30	33.3	36.8	1	48.4	165.3	5
8.0SMDJ33A	8.0SMDJ33CA	8PFM	8BFM	33	36.7	40.6	1	53.3	150.1	5
8.0SMDJ36A	8.0SMDJ36CA	8PFP	8BFP	36	40.0	44.2	1	58.1	137.8	5
8.0SMDJ40A	8.0SMDJ40CA	8PFR	8BFR	40	44.4	49.1	1	64.5	124.1	5
8.0SMDJ43A	8.0SMDJ43CA	8PFT	8BFT	43	47.8	52.8	1	69.4	115.3	5
8.0SMDJ45A	8.0SMDJ45CA	8PFV	8BFV	45	50.0	55.3	1	72.7	110.1	5
8.0SMDJ48A	8.0SMDJ48CA	8PFX	8BFX	48	53.3	58.9	1	77.4	103.4	5
8.0SMDJ51A	8.0SMDJ51CA	8PFZ	8BFZ	51	56.7	62.7	1	82.4	97.1	5
8.0SMDJ54A	8.0SMDJ54CA	8PGE	8BGE	54	60.0	66.3	1	87.1	92.0	5
8.0SMDJ58A	8.0SMDJ58CA	8PGG	8BGG	58	64.4	71.2	1	93.6	85.5	5
8.0SMDJ60A	8.0SMDJ60CA	8PGK	8BGK	60	66.7	73.7	1	96.8	82.7	5
8.0SMDJ64A	8.0SMDJ64CA	8PGM	8BGM	64	71.1	78.6	1	103.0	77.7	5
8.0SMDJ70A	8.0SMDJ70CA	8PGP	8BGP	70	77.8	86.0	1	113.0	71.0	5
8.0SMDJ75A	8.0SMDJ75CA	8PGR	8BGR	75	83.3	92.1	1	121.0	66.2	5
8.0SMDJ78A	8.0SMDJ78CA	8PGT	8BGT	78	86.7	95.8	1	126.0	63.5	5
8.0SMDJ85A	8.0SMDJ85CA	8PGV	8BGV	85	94.4	104.0	1	137.0	58.4	5
8.0SMDJ90A	8.0SMDJ90CA	8PGX	8BGX	90	100.0	111.0	1	146.0	55.0	5
8.0SMDJ100A	8.0SMDJ100CA	8PGZ	8BGZ	100	111.0	123.0	1	162.0	49.4	5
8.0SMDJ110A	8.0SMDJ110CA	8PHE	8BHE	110	122.0	135.0	1	177.0	45.2	5

Rating And Characteristic Curves (TA=25°C unless otherwise noted)



Package Outline Dimensions in inches (millimeters)



Part Marking System



PDW:Company Logo
XX:Marking Code

Cathode Band
(for uni-directional products only)

Summary of Packing Options

Package	Packing Description	Packing Quantity
SMC	Tape/Reel, 13" reel	3000