

Transient Voltage Suppressor

FEATURES

- ◆ Excellent clamping capability
- ◆ Low leakage current
- ◆ Low capacitance
- ◆ 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

APPLications

- ◆ Telecom
- ◆ Computer
- ◆ Industrial electronic
- ◆ Consumer electronic

Maximum Ratings and Electrical characteristics

Ratings at 25 ambient temperature unless o °C therwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation	P_{PPM}	600	W
Steady State Power Dissipation	P_D	5	W
Peak Forward Surge Current	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage at 50A	V_{FM}	3.5/5	V
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	20	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	100	°C/W
Operating Junction Temperature and Storage Temperature Range	T_J, T_{STG}	-50 to +150	°C

NOTES:

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

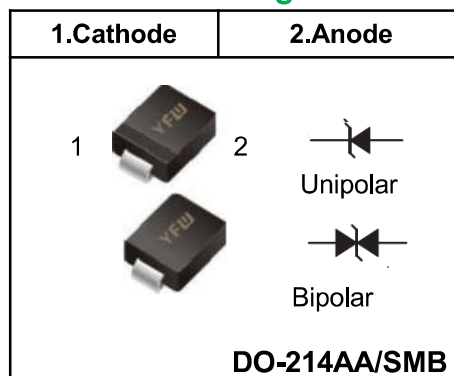
Notes2: Mounted on copper pad area of 5×5mm to each terminal.

Notes3: Infinite HeatS ink atTA=50°C

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

Notes5: For UnidirectionalOnly, $V_{FM} < 3.5V$ for $V_{BR} \leq 200V$ and $V_{FM} < 5.0V$ for $V_{BR} \geq 201V$.

Pinning



Electrical Characteristics

Part Number	Device Marking Code	Reverse Stand-off Voltage	Breakdown Voltage $V_{BR @ T}$		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
		$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX.}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMBJ3.3A	3.3A	3.3	5.2	6.0	10	7.3	82.2	200
SMBJ3.3CA	3.3CA	3.3	5.2	6.5	10	8.0	82.2	200

Ratings and Characteristic Curves

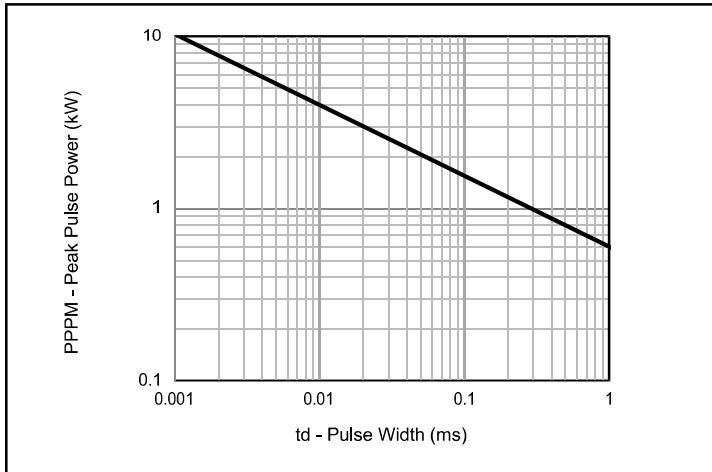


Fig.1 - Peak Pulse Power Rating

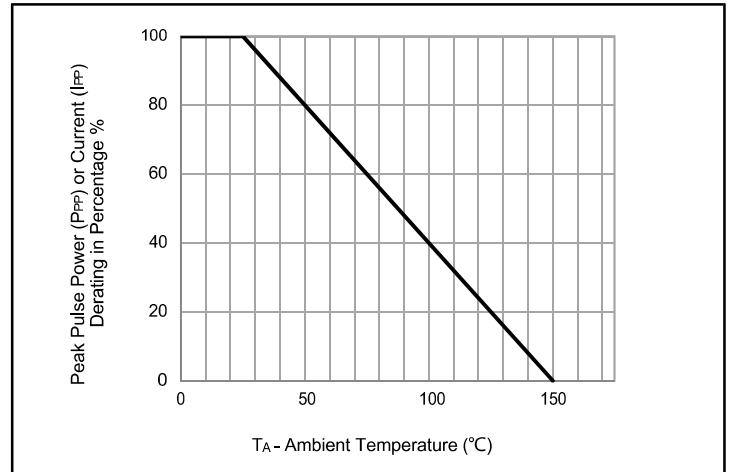


Fig.2 - Pulse Derating Curve

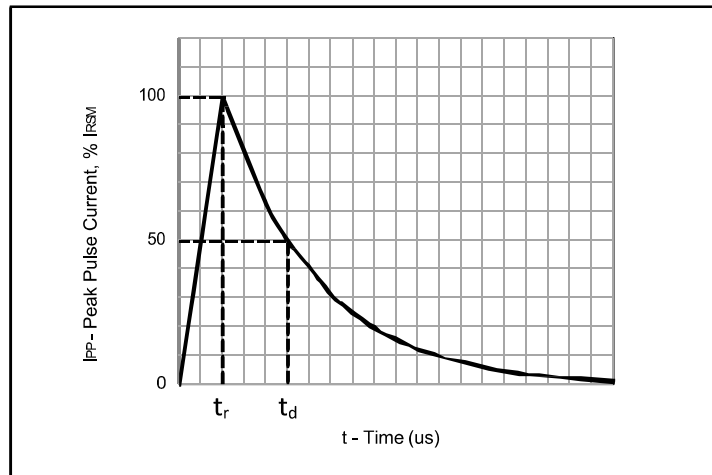


Fig.3 - Pulse Waveform

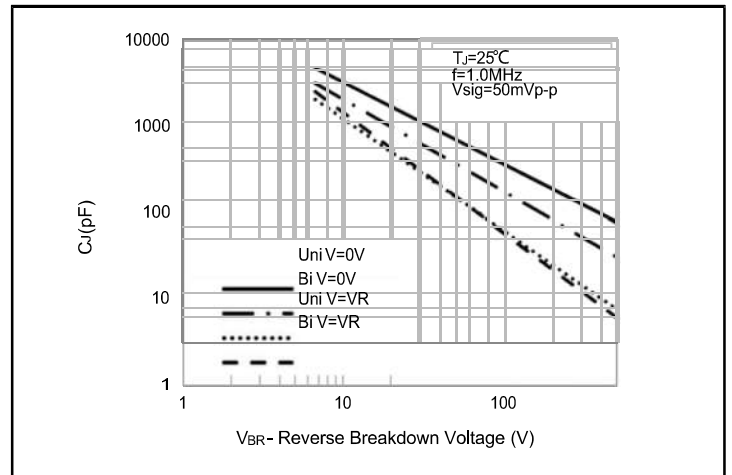


Fig.4 - Typical Junction Capacitance

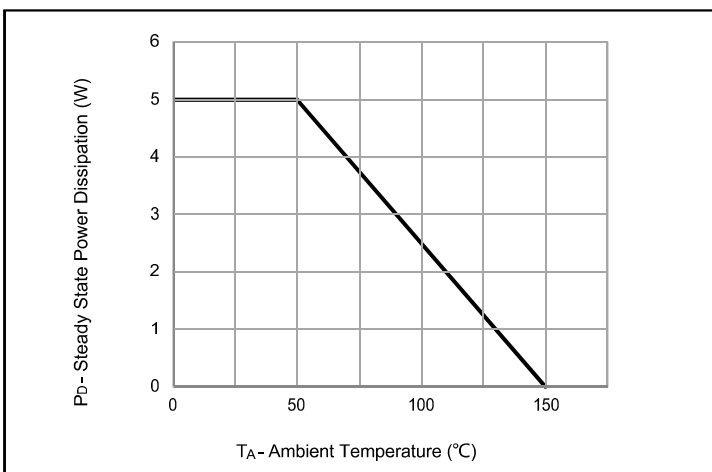


Fig.5 - Steady State Power Dissipation Derating Curve

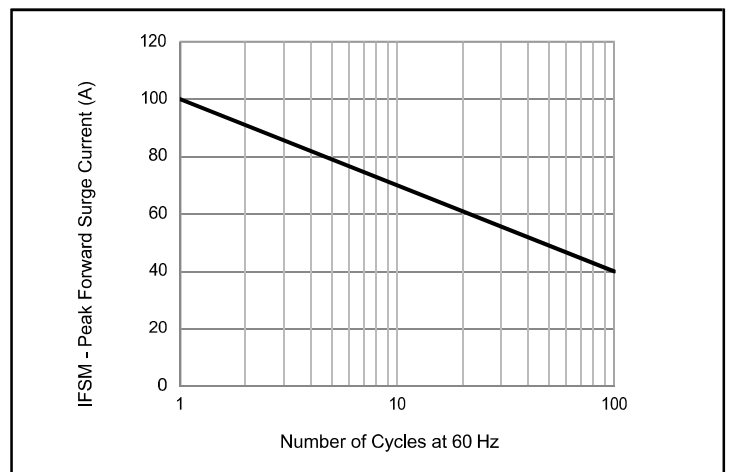
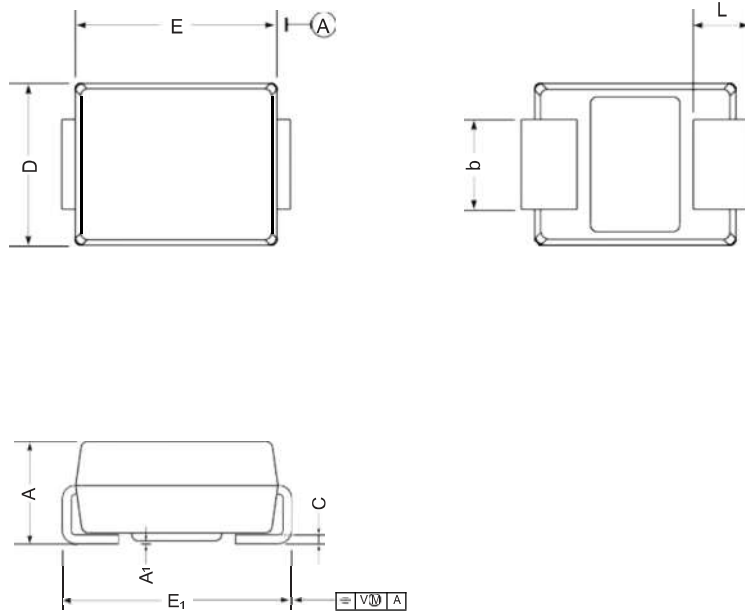


Fig.6 - Maximum Non-Repetitive Peak Forward Surge Current
Uni-Directional Only

Package Outline

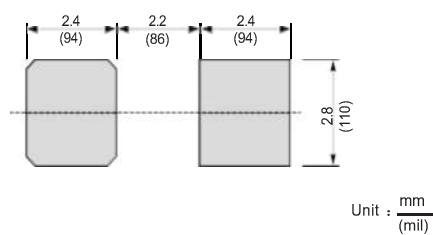
DO-214AA SMB

Plastic surface mounted package; 2 leads



UNIT		A	E	D	E ₁	A ₁	L	C	b
mm	max	2.44	4.70	3.94	5.59	0.20	1.5	0.305	2.2
	min	2.13	4.06	3.3	5.08	0.05	0.8	0.152	1.9
mil	max	96	185	155	220	7.9	59	12	87
	min	84	160	130	200	2.0	32	6	75

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-214AA SMB	Tape/Reel, 13" reel	3000	EIA-481-1