Surface Mount Transient Voltage Suppressors

DO-218AB

Uni-directional

Bi-directional

Features

- Optimized glass passivated chip T_J = 175 °C capability suitable for high reliability and automotive requirement
- 3600 W peak pulse power capability with a 10/1000 µs waveform, repetitive rate (duty cycle):0.01 %
- Meet ISO 7637-2 5a/5b and ISO 16750 load dump test (varied by test condition)
- Part no. with suffix “Q” means AEC-Q101 qualified
- Low leakage current
- Low forward voltage drop
- Uni-directional polarity
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- **Package**: DO-218AB
- **Molding compound:** UL94V-0 flammability
- **Polarity:** Heatsink is anode

■Maximum Ratings (T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	Value
Peak power dissipation with a 10/1000µs waveform(1)	P_{PP}	W	3600
Peak power dissipation with a 10/10,000µs waveform	P_{PP}	W	2800
Peak pulse current with a 10/1000µs waveform(1)	I_{PP}	A	See Next Table
Power dissipation on infinite heatsink at T_L = 25 °C	P_D	W	5.0
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	A	500
Operating junction and storage temperature range	T_J, T_{STG}	°C	- 55 to +175

Note:
(1) Non-repetitive current pulse per Fig.2 and derated above TA= 25 °C per FIG.1

■**Thermal Characteristics** T_a=25 Unless otherwise specifie

Part Number		Breakdown Voltage VBR @IT			Maximum Reverse Leakage IR @V_{RWM} (uA)	Ma IR @ T_J=1 (uA)		
		Min (V)	Max (V)	IT (mA)				
SM5S10AQ	SM5S10CAQ	11.1	12.3	5.0	15	250		
SM5S11AQ	SM5S11CAQ	12.2	13.5	5.0	10	150		
SM5S12AQ	SM5S12CAQ	13.3	14.7	5.0	10	150		
SM5S13AQ	SM5S13CAQ	14.4	15.9	5.0	10	150	13	
SM5S14AQ	SM5S14CAQ	15.6	17.2	5.0	10	150	14	
SM5S15AQ	SM5S15CAQ	16.7	18.5	5.0	10	150	15	
SM5S16AQ	SM5S16CAQ	17.8	19.7	5.0	10	150	16	
								130
								123
								111
								101
								93
								86
								79
								74
								68

■ **Characteristics** (Typical)

FIG.1 Pulse Derating Curve

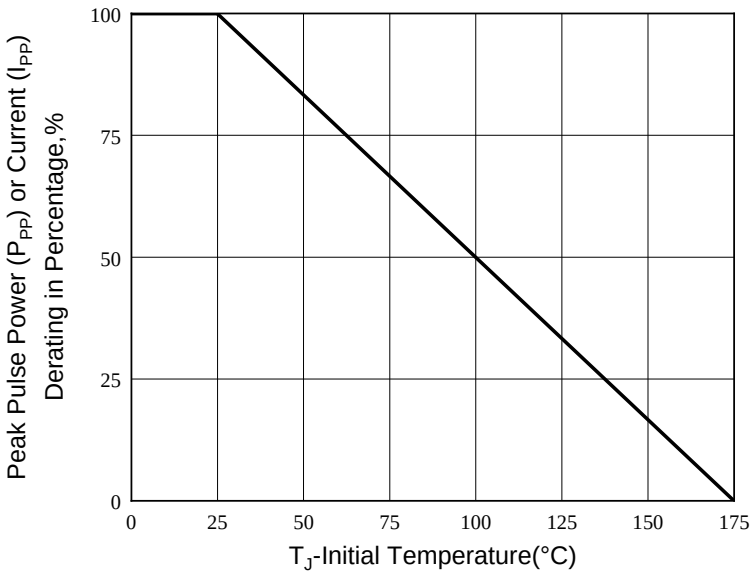


FIG.2 Pulse Waveform

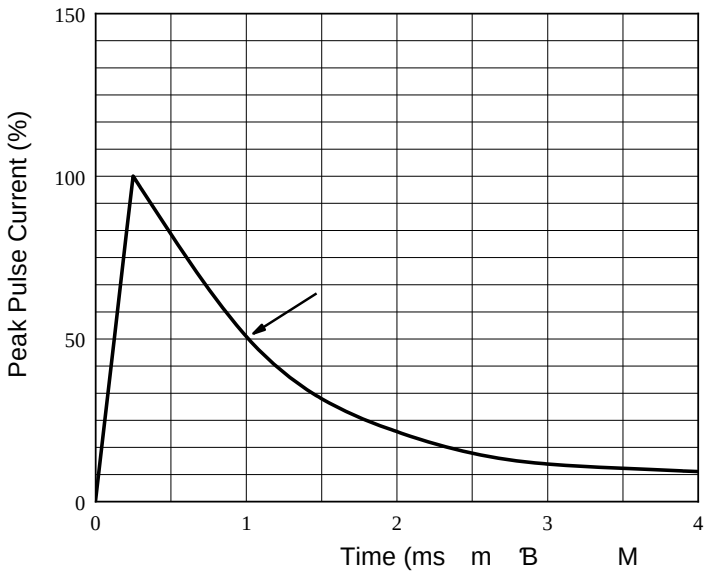
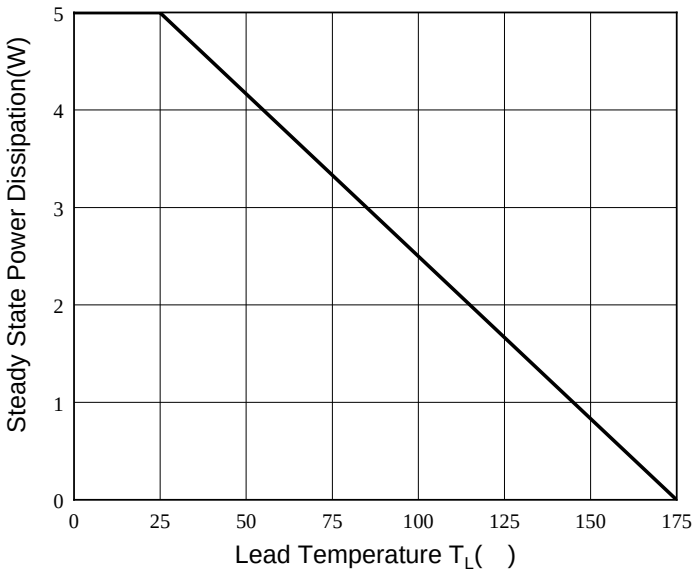


FIG.3 Steady State Power Derating Curve



■**Ordering Information** (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM

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