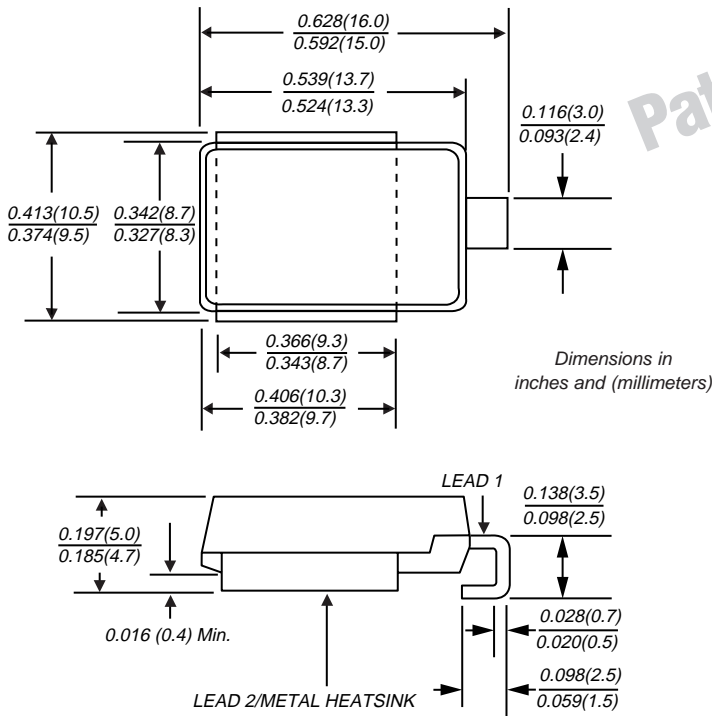
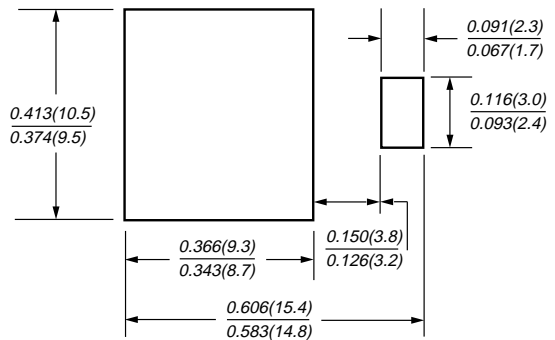


Surface Mount Automotive Transient Voltage Suppressor


DO-218AB
Zener Voltage 27V Peak Pulse Current 70A (10/10,000μs)
Peak Pulse Power 3600W (10/1000μs)


Patented*

Mounting Pad Layout


*Patent #s:
 4,980,315
 5,166,769
 5,278,095

Features

- Ideally suited for load dump protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature stability due to unique oxide passivation and patented PAR[®] construction
- Integrally molded heatsink provides a very low thermal resistance for maximum heat dissipation
- Low leakage current at T_J = 175°C
- High temperature soldering guaranteed: 260°C for 10 seconds at terminals
- Meets ISO7637-2 surge spec.
- Low forward voltage drop

Mechanical Data

- Case:** Molded plastic body, surface mount with heatsink integrally mounted in the encapsulation
- Terminals:** Plated, solderable per MIL-STD-750, Method 2026
- Polarity:** Heatsink is anode
- Mounting Position:** Any
- Weight:** 0.091 oz., 2.58 g
- Packaging codes/options:**
 2D/750 per 13" Reel (16mm Tape),
 anode towards sprocket hole, 4.5K/box
 2E/750 per 13" Reel (16mm Tape),
 cathode towards sprocket hole, 4.5K/box

Maximum Ratings and Thermal Characteristics (T_C = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Steady state power dissipation	P _D	5.0	W
Non-repetitive peak reverse surge current for 10μs/10ms exponentially decaying waveform	I _{RSM}	70	A
Maximum working stand-off voltage	V _{WM}	22.0	V
Peak forward surge current 8.3ms single half sine-wave	I _{FSM}	500	A
Typical thermal resistance junction to case	R _{θJC}	1.0	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	°C

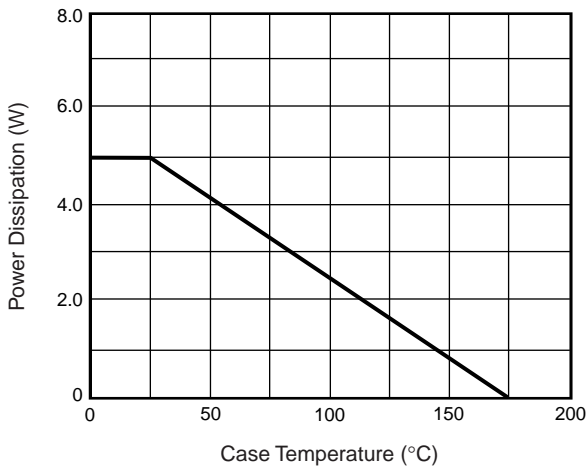
Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit
Reverse zener voltage at 10mA	V_Z	24.0	–	30.0	V
Zener voltage temperature coefficient at $I_Z = 10\text{mA}$	V_{ZTC}	–	–	36	$\text{mV}/^\circ\text{C}$
Clamping voltage for 10 μs /10ms exponentially decaying waveform at $I_{PP} = 55\text{A}$	V_C	–	–	40.0	V
Instantaneous forward voltage ⁽¹⁾	V_F	–	–	1.0	V
		at 6.0A	–	–	
		at 100A	0.95	–	
Reverse leakage current at rated V_{WM}	I_R	–	–	0.2	μA
		$T_J = 25^\circ\text{C}$	–	–	
		$T_J = 175^\circ\text{C}$	–	10.0	

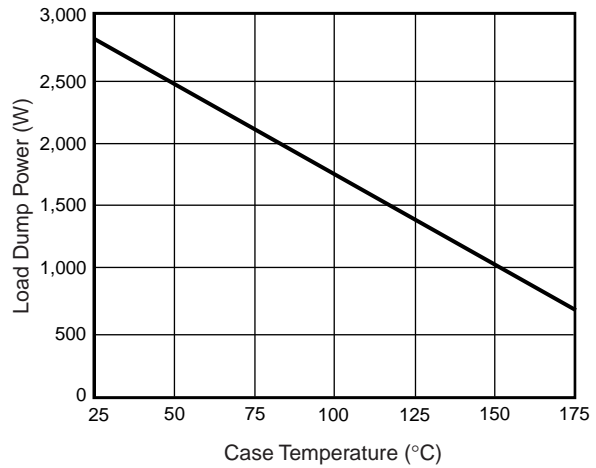
Notes: (1) Measured on a 300 μs square pulse width

Ratings and Characteristic Curves $T_A=25^\circ\text{C}$ unless otherwise noted.

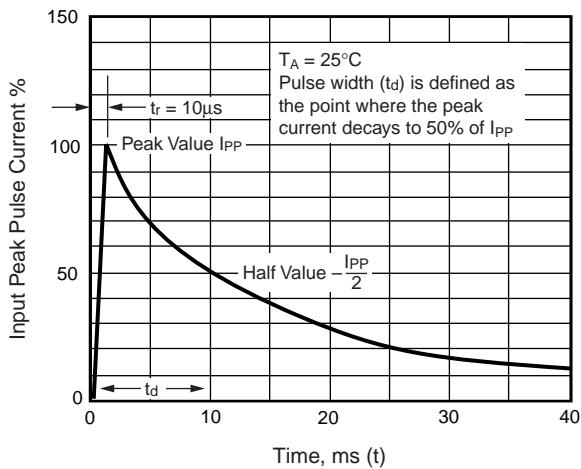
Power Derating Curve



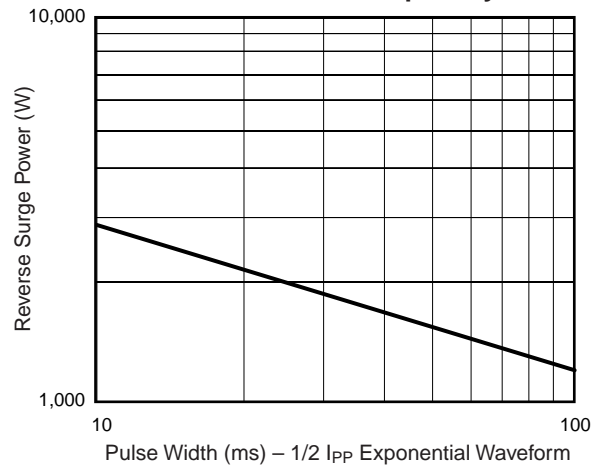
Load Dump Power Characteristics (10ms Exponential Waveform)



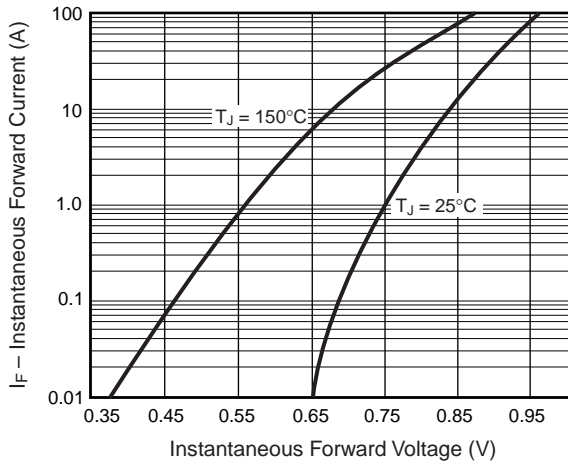
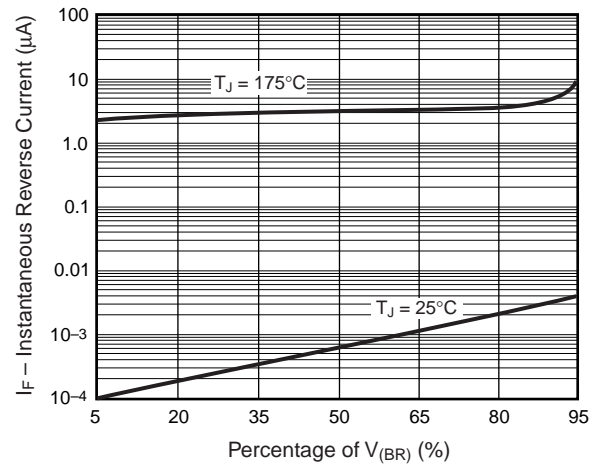
Pulse Waveform



Reverse Power Capability



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Typical Instantaneous Forward Characteristics

Typical Reverse Characteristics

Typical Transient Thermal Impedance
