

TVS Diode – PH3-M Series

Features

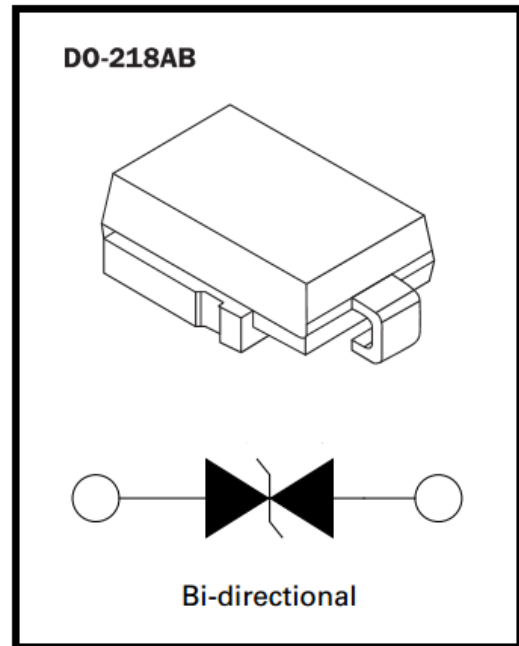
- High current transient suppressor
- High Power TVS in surface mount package
- Ideal for automatic pick and place assembly
- Excellent voltage clamping capability
- Glass passivated junction
- High Reliability Grade
- Low leakage current
- Low Slope Resistance
- Very fast response time
- RoHS compliant
- Plastic package with UL 94V-0

Agency Approval

- UL file no.: E474915

Mechanical and Physical Data

- Case: DO-218AB
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denoted cathode except bidirectional.



Maximum Ratings and Thermal Characteristics

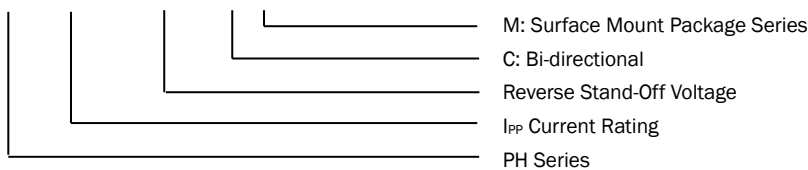
Parameter	Symbol	Value	Unit
Peak Pulse Current of 8/20μs waveform (Note 1, Fig.3).	I_{PP}	3,000	A
Operating Junction and Storage Temperature Range.	T_J, T_{STG}	-55~150	°C

Note:

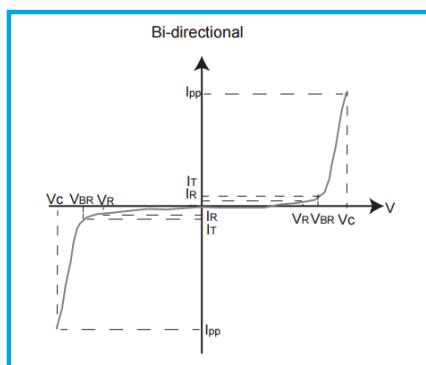
1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig.1.

Part Number Code

PH □□ - □□□ C M



I-V Curve Characteristics



- P_{PPM} **Peak Pulse Power Dissipation** – Maximum power dissipation
- V_R **Stand-off Voltage** – Maximum voltage that can be applied to the TVS without operation
- V_{BR} **Breakdown Voltage** – Maximum voltage that flows through the TVS at a specified test current (I_T)
- V_C **Clamping Voltage** – Peak voltage measured across the TVS at a specified I_{PPM} (Peak Impulse Current)
- I_R **Reverse Leakage Current** – Current measured at V_R

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Electrical Characteristics

Part Number		Reverse Stand Off Voltage V_R		Breakdown Voltage V_{BR} (V) @ I_T	Test Current I_T (mA)	Maximum Clamping Voltage V_C (V) @ I_{PP}	Maximum Peak Pulse Current I_{PP} (kA)	Maximum Reverse Leakage I_R (μ A) @ V_R
Uni	Bi	V_{AC}	V_{DC}	Min.				
PH3-015M	PH3-015CM	11.0	15.0	17.0	1.0	30.0	3	10
PH3-030M	PH3-030CM	21.0	30.0	33.0	1.0	60.0	3	10
PH3-058M	PH3-058CM	40.0	58.0	64.0	1.0	110.0	3	10
PH3-066M	PH3-066CM	45.0	66.0	70.0	1.0	125.0	3	10
PH3-076M	PH3-076CM	54.0	76.0	85.0	1.0	140.0	3	10
PH3-100M	PH3-100CM	72.0	100.0	110.0	1.0	165.0	3	10

Ratings and Characteristic Curves

Fig 1 - Pulse Derating Curve

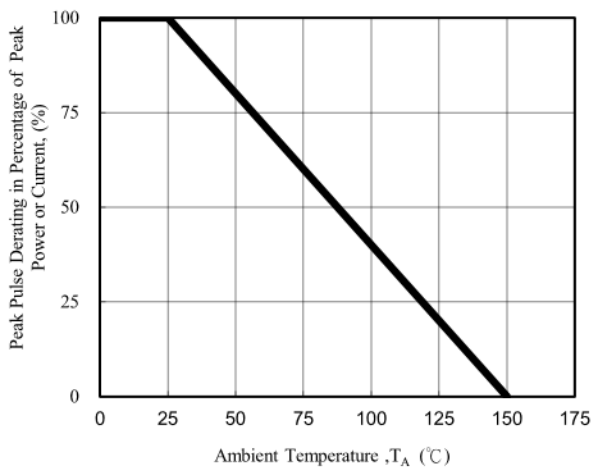


Fig 2 - Pulse Waveform

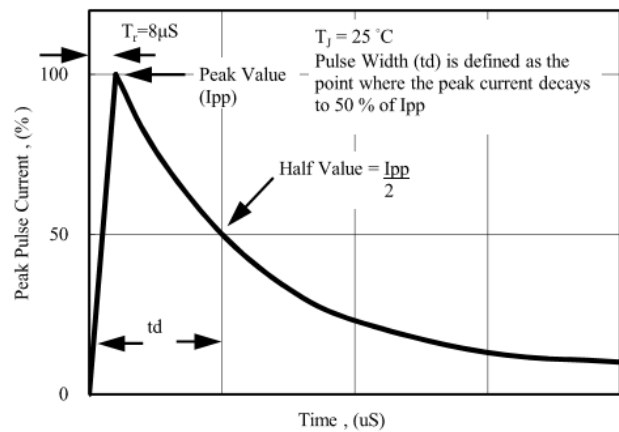


Fig 3 - Steady State Power Derating Curve

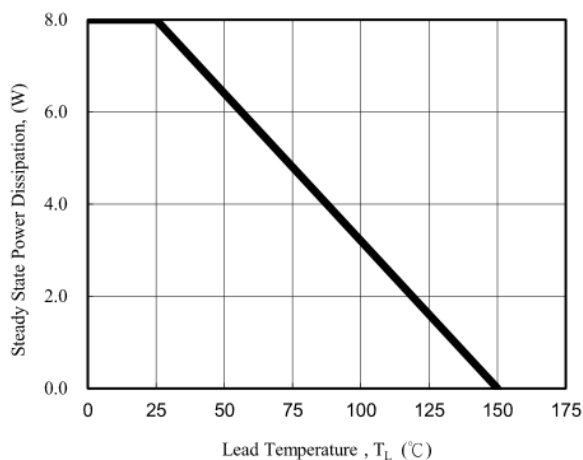
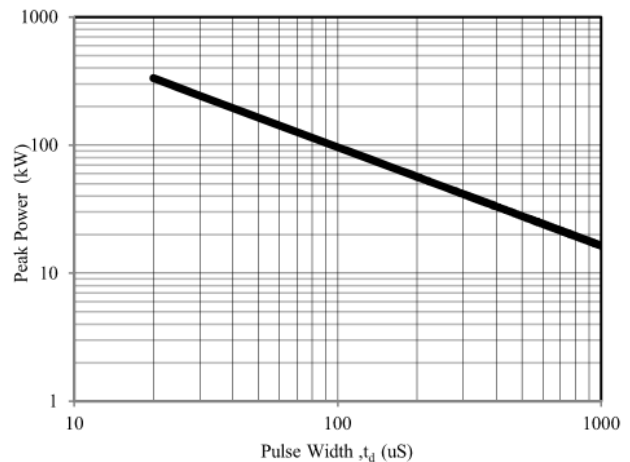
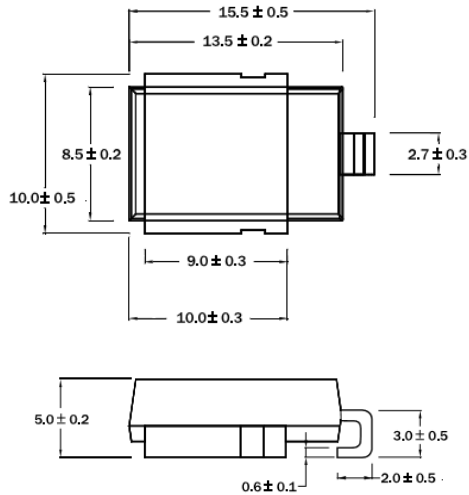


Fig 4 - Peak Pulse Power Rating Curve

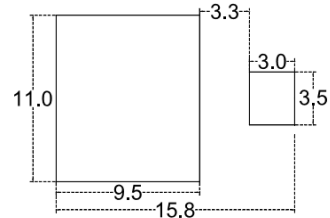


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Physical Dimensions (Millimeters)



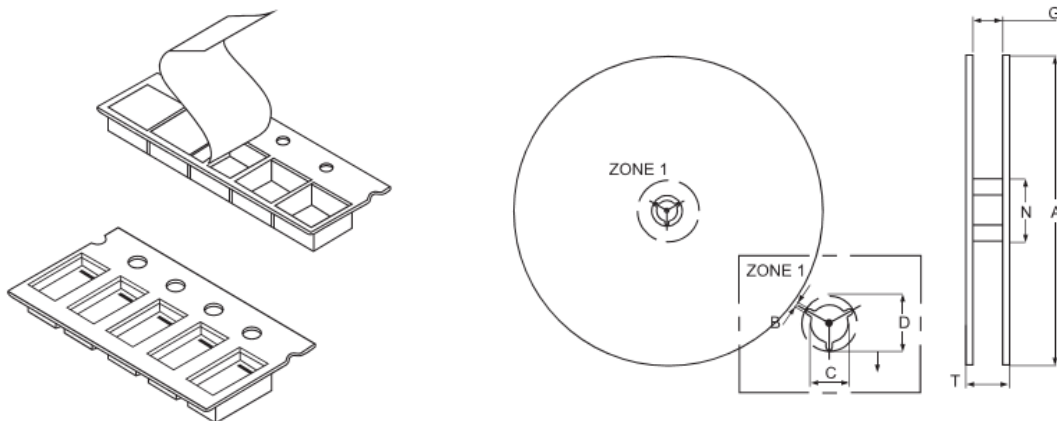
Recommended Mounting Pad Layout



Packaging Information

Part Number	Packaging Code	Component Package	Quantity	Packaging Option	Packaging Specification
PH3-M Series	T7	D0-218AB	150	Tape & Reel – 24mm tape/7" reel	EIA STD RS-481
PH3-M Series	T13	D0-218AB	750	Tape & Reel – 24mm tape/13" reel	EIA STD RS-481

Tape and Reel Specifications



Symbol	A	B (Min.)	C	D (Min.)	N (Min.)	G (Max.)	T (Max.)
Spec	330±2.0 (13.0±0.079) 178±2.0 (7.0±0.079)	1.5 (0.059)	13.0±0.2 (0.51±0.008)	20.2 (0.795)	50.0 (1.97)	26.4 (1.039)	30.4 (1.197)

*Dimension in mm (inch)