TVS Diode – PH20 Series

Features

- Axial lead terminals
- High current transient suppressor
- Excellent voltage clamping capability
- Glass passivated junction
- Bi-directional
- Low slope resistance
- Repetition rate (Duty cycle): 0.01%
- RoHS compliant
- Epoxy encapsulated

Agency Approval

- UL file no.: E474915

Mechanical and Physical Data

- Case: Epoxy resin
- Axial leaded, solderable per MIL-STD-750, Method 2026
- Polarity: Bi-directional

Maximum Ratings and Thermal Characteristics

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

Note:

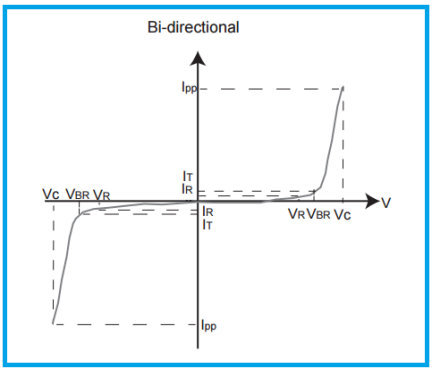
1. Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig.1.
2. 8.3ms single half sine wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

Part Number Code

PH 20 - □□□ D

- D Series
- Reverse Stand-Off Voltage
- I_{PP} Current Rating: 20kA
- PH Series

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	Maximum Clamping Voltage V_C (V) @ I_{PP}	Maximum Peak Pulse Current I_{PP} (kA)	Maximum Reverse Leakage I_R (μA) @ V_R
Bi-directional	(V_{DC})	Min.	(mA)			
PH20-020D	20.0	22.0	1.0	40.0	20	20
PH20-025D	25.0	28.0	1.0	50.0	20	20
PH20-030D	30.0	33.0	1.0	60.0	20	20
PH20-058D	58.0	64.0	1.0	110.0	20	20
PH20-066D	66.0	70.0	1.0	125.0	20	20
PH20-076D	76.0	85.0	1.0	140.0	20	20
PH20-100D	100.0	110.0	1.0	165.0	20	20
PH20-133D	133.0	147.0	1.0	220.0	20	20

Ratings and Characteristic Curves

Fig 1 - Peak Pulse Power Rating Curve

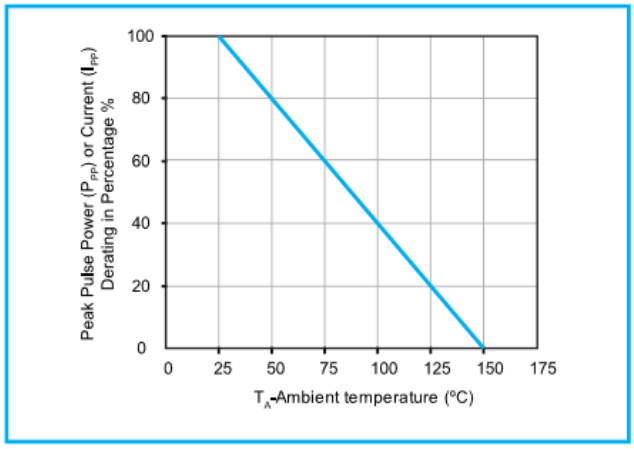


Fig 2 - Pulse Waveform (10/1000μS)

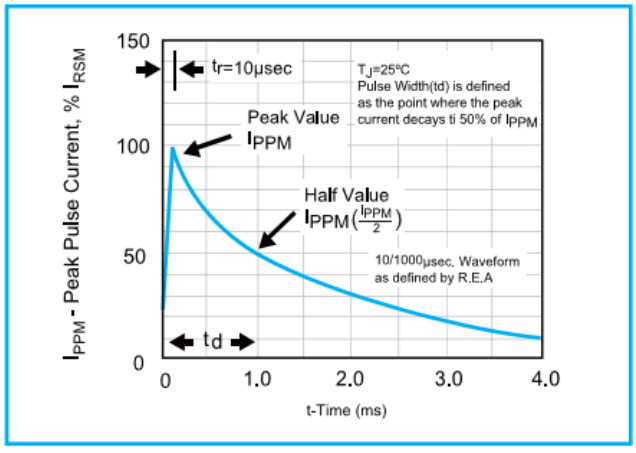
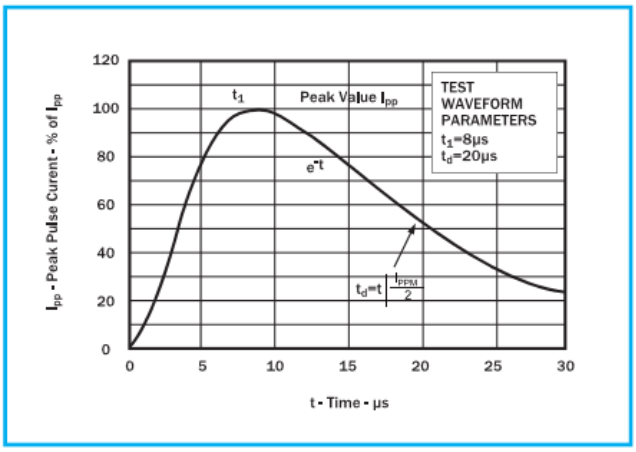


Fig 3 - Pulse Waveform (8/20μS)



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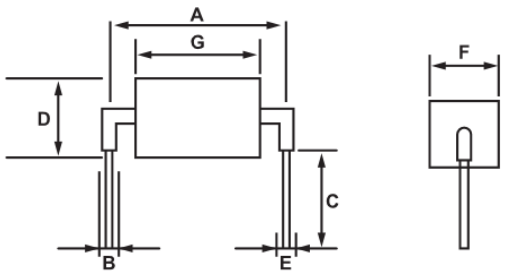
Physical Dimensions



Dimension	Millimeters
A	24.15±1.0
B	2.4±0.8
C	6.0±1.0
D	14.0 Max
E	1.28±0.5
F	14.0 Max
G	22.0 Max