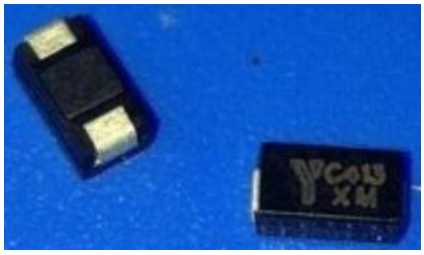
SMAJ-H Series

General Information

The SMA-H series is designed to protect voltage sensitive components from high voltage, high energy transients. They have excellent clamping capability, high surge capability, low zener impedance and fast response time. The SMA-H series is supplied in YINT Semiconductor's exclusive, cost-effective, highly reliable and is ideally suited for use in communication systems, automotive, numerical controls, process controls, medical equipment, business machines, power supplies and many other industrial/consumer Applications.



Molded plastic
glass passivated junction.

Features

- Case: DO-214AC/SMA
- Glass passivated chip
- 400W peak pulse power capability with a 10/1000us waveform,repetitive rate(duty cycle):0.01%
- Low leakage
- Uni and Bidirectional unit
- Excellent clanping capability
- Very fast response time

Applications

TVS devices are ideal for the protection of I/O Interfaces, V_{CC} bus and other vulnerable circuits used in Telecom, Computer, Industrial and Consumer electronic applications.

Electrical Characteristics (@ TA = 25° C Unless Otherwise Noted)

Parameter	Symbol	Value	Unit
Minimum Peak Pulse Power Dissipation (T = 1 ms) (note1;note 2)	PPK	400	Watts
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) (Note 3)	IFSM	40	Amps
Steady State Power Dissipation @ TL = 75 ° C	PM(AV)	1	Watts
Maximum Instantaneous Forward Voltage @ I PP = 50 A (For Unidirectional Units Only) (note4;note 5)	VF	3.5/5	Volts
Operating Temperature Range	TJ	-55 to +150	° C
Storage Temperature Range	TSTG	-55 to +175	° C

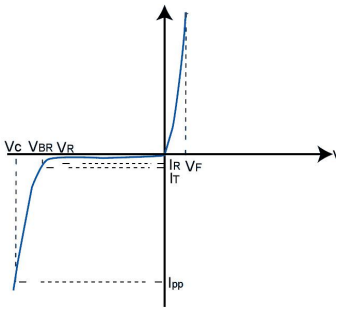
NOTES:

1. Non-repetitive current pulse, per Pulse Waveform graph and derated above T_A = 25 °C per Pulse Derating Curve.
2. Measured on 8.3 ms Single Half Sine –Wave or equivalent square wave ,duty cycle = 4 pulses per minute maximum
3. V_F<3.5V for V_{BR}< 200V and V_F <5.0V for V_{BR}> 201V.

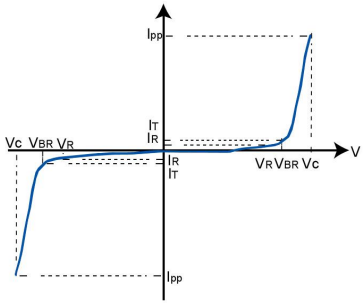
Electrical Characteristics (TA = 25 °C unless otherwise noted)

Part Number (Bi)	Part Number (Uni)	MARKING		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts)@I_T		Test Current I_T(mA)	Maximum Reverse Leakage I_R @ V_R(μA)	Maximum Peak Pulse Current Ipp(A)	Maximum Clamping Voltage V_C @ I_{pp}(V)
		BI	UNI		Min .V	Max .V				
SMAJ33CA-H	SMAJ33A-H	YMH	CMH	33.0	36.70	40.60	1	1	7.5	53.3

I-V Curve Characteristics



Uni-directional



Bi-directional

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current

Rating & Characteristic Curves

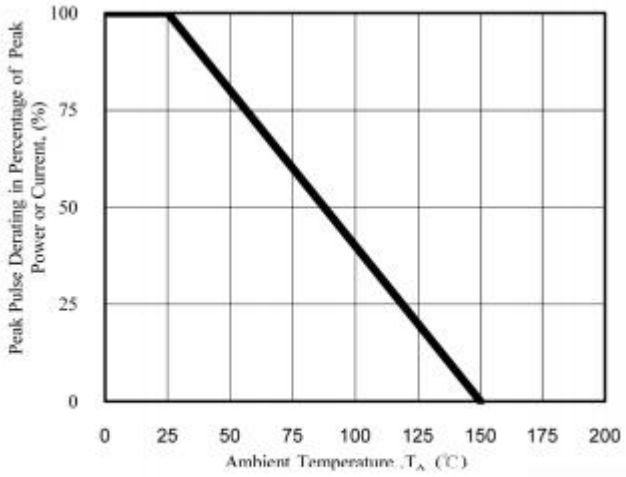


Fig. 1 - Pulse Derating Curve

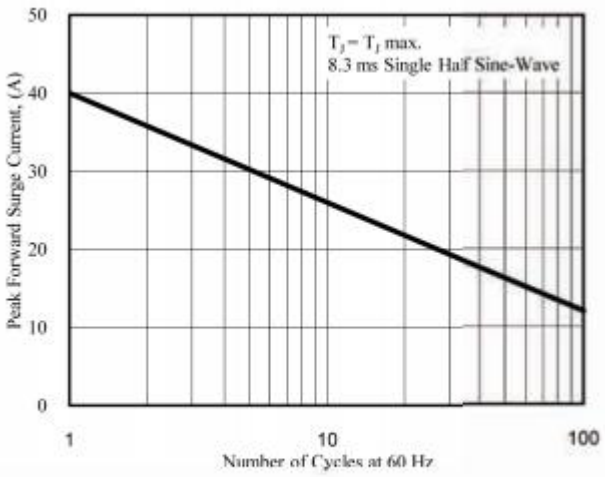


Fig. 2 - Maximum Non-Repetitive Surge Current

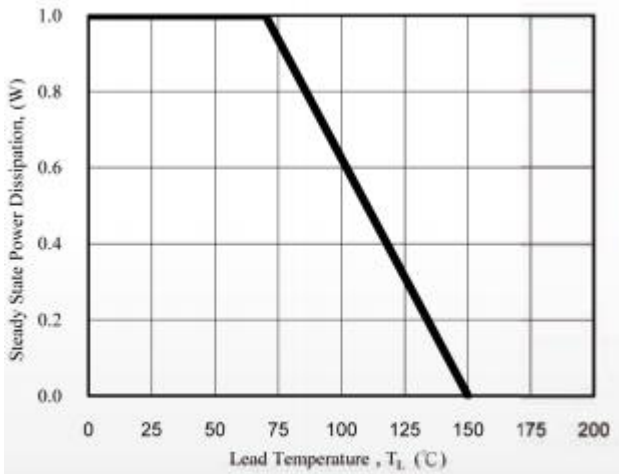


Fig. 3 - Steady State Power Derating Curve

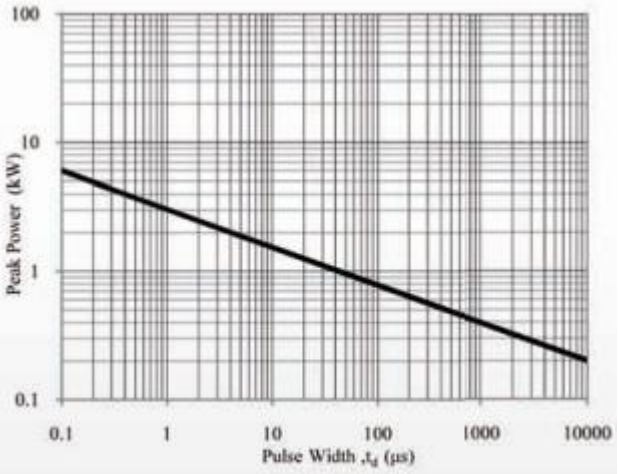


Fig. 4 - Peak Pulse Power Rating Curve

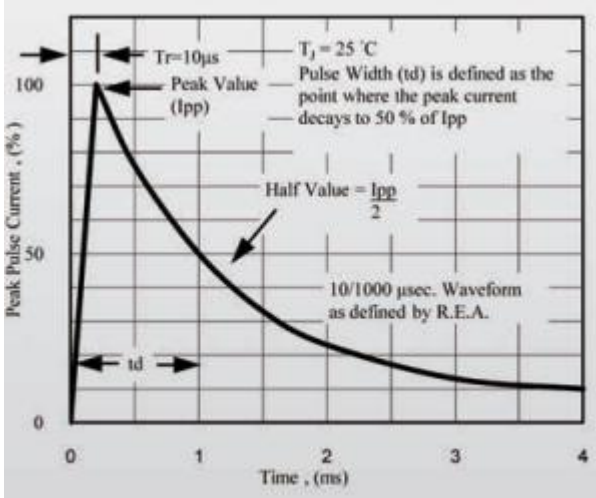


Fig. 5 - Pulse Waveform

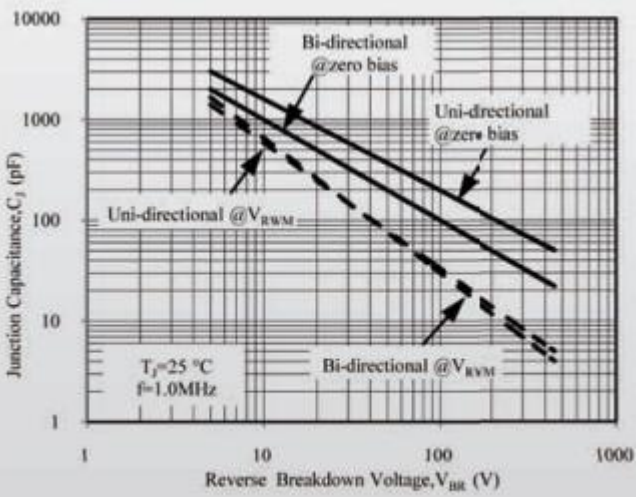
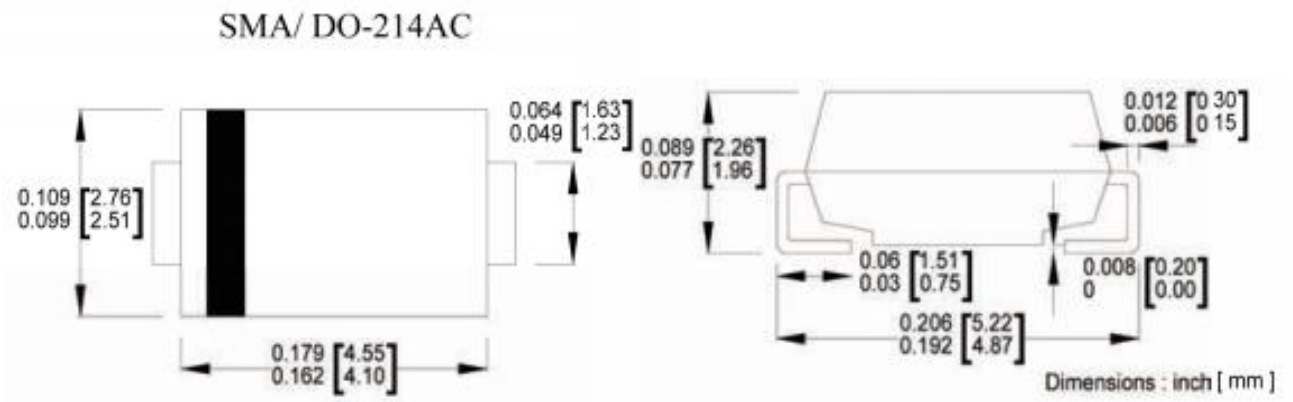
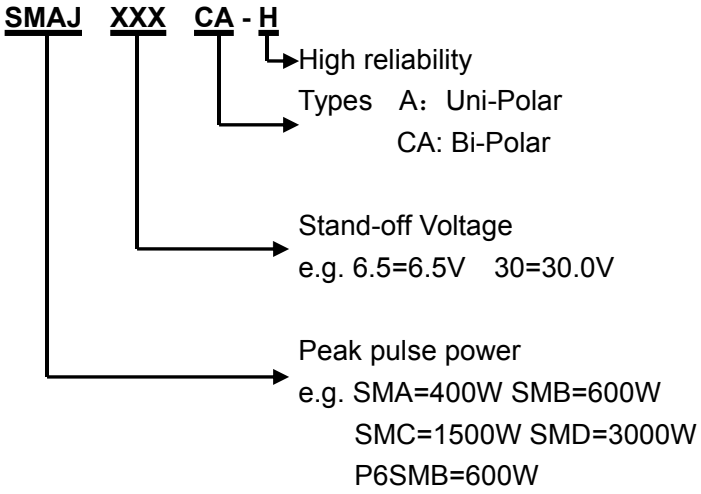


Fig. 6 - Typical Junction Capacitance

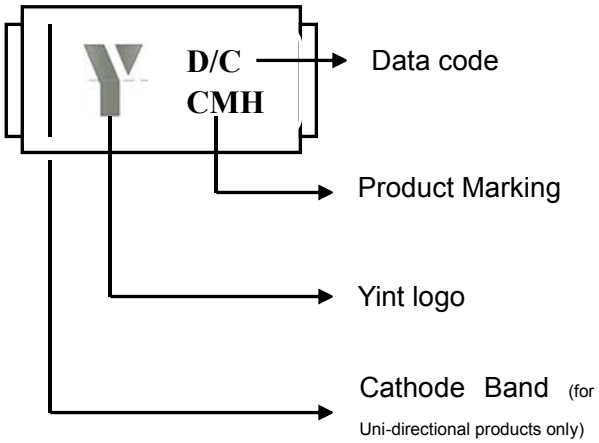
PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



Part Numbering System



Part Marking System



Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.