

Surface mount transient voltage suppressor power 400 watts
Stand-Off Voltage: 188V

FEATURES

- ◆ For surface mounted applications in order to optimize board space.
- ◆ Low profile package.
- ◆ Glass passivated junction.
- ◆ Low inductance.
- ◆ Plastic package has Underwriters Laboratory Flammability.

MECHANICAL DATA

- ◆ Case: DO-214AC/SMA
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 0.07g / 0.002oz

Maximum Ratings and Electrical characteristics

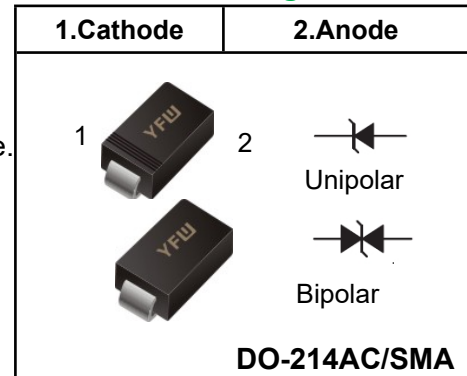
Ratings at 25 ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on TA=25°C (Note 1,2,5, Fig1)	P_{PPM}	400	W
Peak Forward Surge Current (Note3, Note4)	I_{FSM} (UNI)	40	A
Peak Pulse Current on 10/1000 us waveform (Note 1) Fig 3	I_{PPM}	see Table 1	A
ESD Voltage per IEC6100-4-2	Contact	±30	kV
	Air	±30	
Typical Junction Capacitance at VR=4V, f=1MHz	C_j	390	pF
Typical Thermal Resistance Junction to Ambient(Note 2)	R_{θJA}	70	°C/W
Operating Junction Temperature and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2.
2. Mounted on 5mm² copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000µS.

Pinning



Characteristics at Ta = 25°C

Table 1

Part Number (Uni)	Part Number (Bi)	Marking		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP} (A)	Maximum Reverse Leakage I_R @ V_R (μA)	Agency Approval
		UNI	BI		MIN	MAX					
SMAJ188A	SMAJ188CA	SS	VS	188.0	209.00	231.00	1.0	328.0	0.91	1.0	X

For bidirectional type having V_{RWM} of 10 volts and less, the I_p limit is double.
For parts without A (V_{BR} is $\pm 10\%$ and V_C is 5% higher than with A parts).

Fig.1 Peak Pulse Power Rating Curve

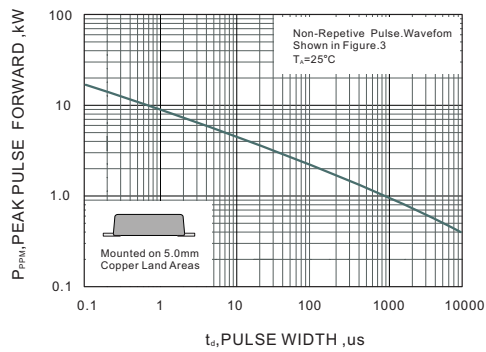


Fig.2 Forward Current Derating Curve

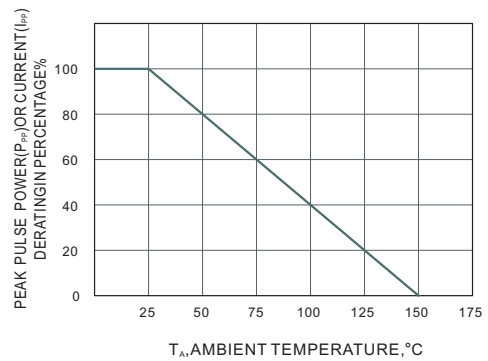


Fig.3 Pulse Waveform

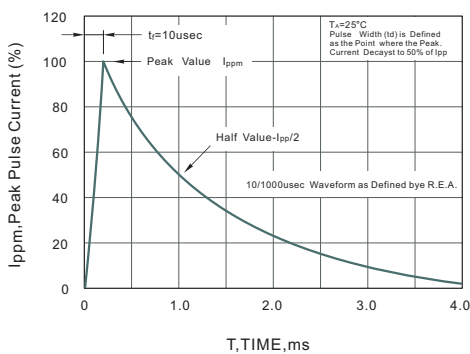
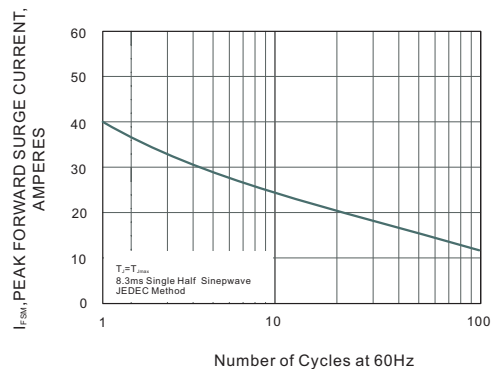
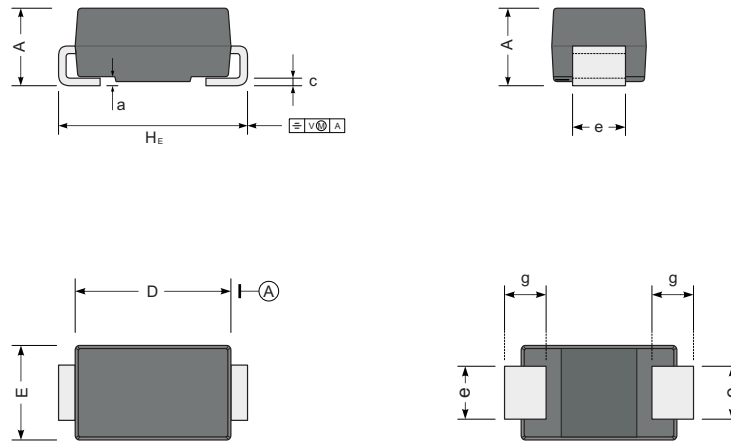


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



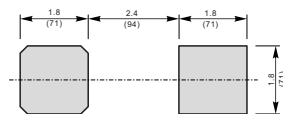
Package Outline DO-214AC SMA

Plastic surface mounted package; 2 leads



UNIT		A	D	E	H _E	c	e	g	a
mm	max	2.42	4.5	2.80	5.2	0.31	1.6	1.5	0.3
	min	1.98	4.0	2.54	4.7	0.15	1.3	0.9	
mil	max	96	181	110	205	12	63	59	12
	min	78	157	100	185	6	51	35	

The recommended mounting pad size



Unit : $\frac{\text{mm}}{\text{(mil)}}$

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-214AC SMA	Tape/Reel, 11" reel	5000	EIA-481-1
	Tape/Reel, 7" reel	2000	EIA-481-1