

Surface mount transient voltage suppressor power 400 watts

Stand-Off Voltage: 509V

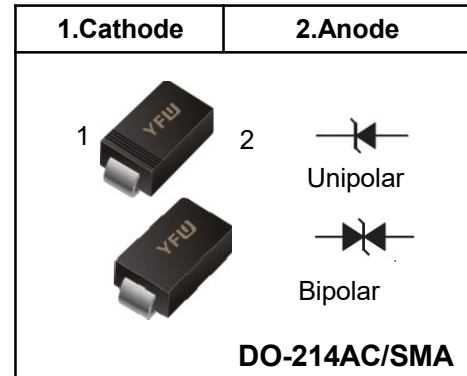
Features

- ◆ Glass passivated chip
- ◆ 400 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- ◆ Excellent clamping capability
- ◆ Low reverse leakage
- ◆ Very fast response time
- ◆ Lead and body according with RoHS standard

Mechanical Data

- ◆ Case: DO214AC/(SMA) Molded plastic
- ◆ Lead: Solderable per MIL-STD-750, method 2026
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Polarity: Color band denotes cathode end except Bipolar
- ◆ Mounting position: Any

Pinning



Maximum Ratings & Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	400	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at TL= 75 °C	P _D	3.0	W
Peak forward surge current, 8.3 ms single half sinewaveunidirectional only ⁽²⁾	I _{FSM}	40	A
Maximum instantaneous forward voltage at 25A for unidirectional only ⁽³⁾	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

Note:

- 1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1;
- 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 devices of V_{BR}<200V and V_F<6.5V for devices of V_{BR}>201V.

Characteristics at Ta = 25°C

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V _{BR} @ I _T		Test Current	Max. Clamping Voltage @ I _{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V _{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	V _{RWM} (V)	Min.(V)	Max.(V)	I _T (mA)	V _{C MAX} (V)	I _{PP} (A)	I _R (uA)
P4SMA600A	P4SMA600CA	600A	600C	509.0	570.0	630.0	1	780.0	0.5	1

Ratings and Characteristics Curves (TA=25°C unless otherwise noted)

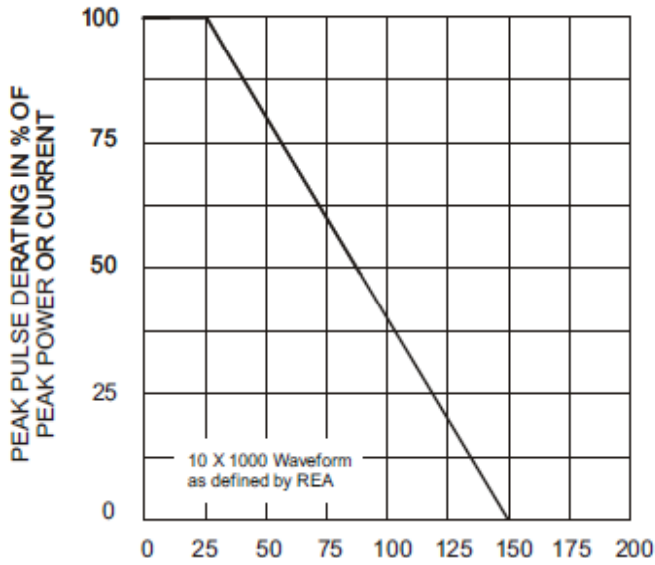


Fig. 1 - Pulse Derating Curve

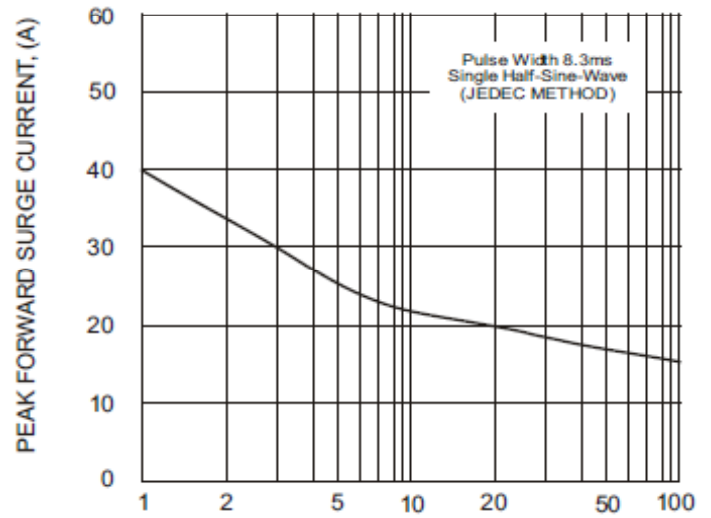


Fig. 2 - Maximum Non-Repetitive Surge Current

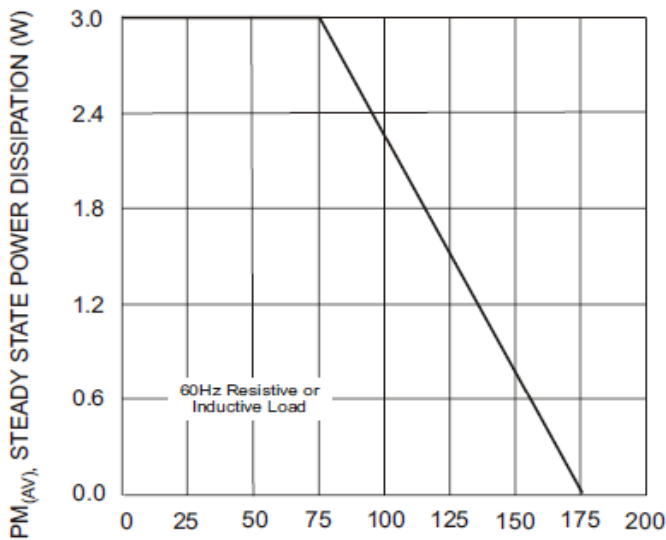


Fig. 3 - Steady State Power Derating Curve

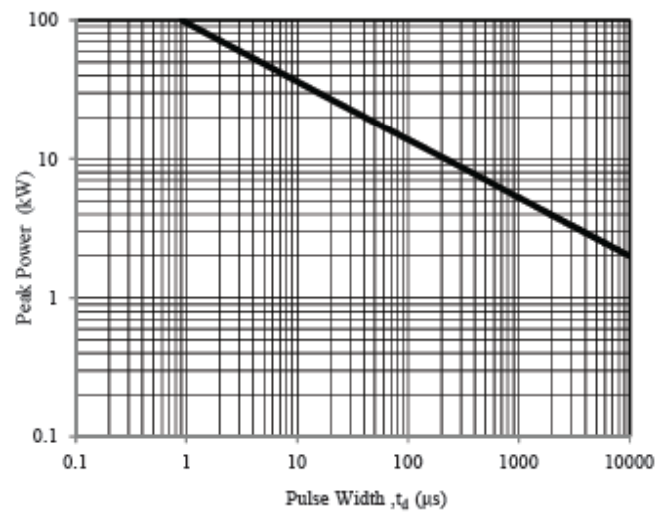


Fig. 4 - Peak Pulse Power Rating Curve

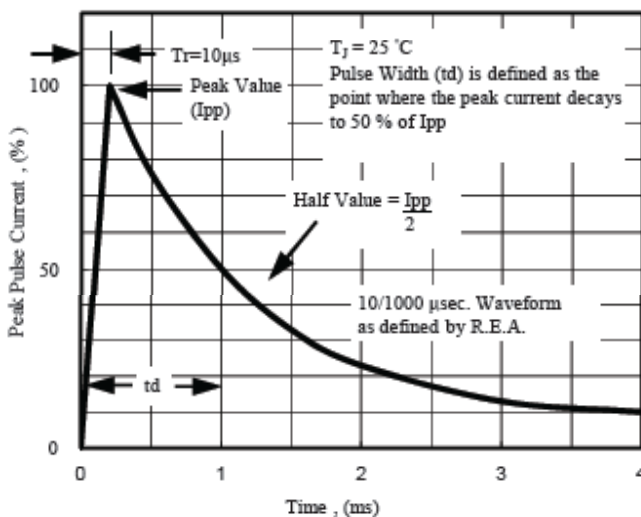


Fig. 5 - Pulse Waveform

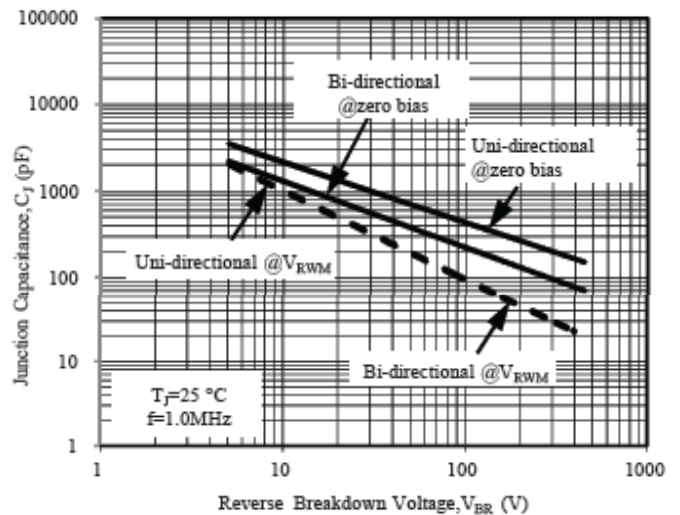
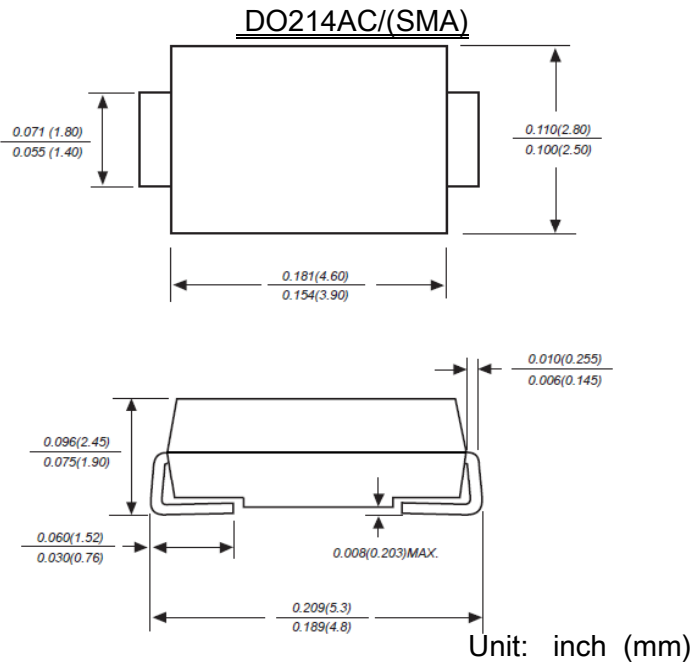


Fig. 6 - Typical Junction Capacitance

Package Outline

DO-214AC SMA



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