

Standard Surface Mounted Rectifiers

Reverse Voltage - 1600V to 2000V

Forward Current - 1.5 A

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250 °C/10 seconds at terminals

MECHANICAL DATA

- ◆ Case : Molded plastic body
- ◆ Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ Polarity : Polarity symbol marking on body
- ◆ Mounting Position : Any
- ◆ Weight : 0.0023 ounce, 0.07 grams

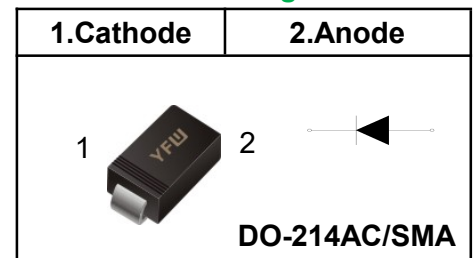
Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbols	SM513	SM516	SM520	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1600	1800	2000	V
Maximum RMS voltage	V_{RMS}	1120	1260	1400	V
Maximum DC Blocking Voltage	V_{DC}	1600	1800	2000	V
Maximum average forward rectified current at $T_L=100^{\circ}C$	$I_{F(AV)}$	1.5			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50.0			A
Maximum instantaneous forward voltage at 1.0A	V_F	1.10			V
Maximum DC reverse current at rated DC blocking voltage TA = 25°C TA = 125°C	I_R	10.0 500			mA
Typical junction capacitance (Note1)	C_J	18.0			°C/W
Typical thermal resistance	$R_{\theta JA}$	80.0			°C
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150			°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Pinning



Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

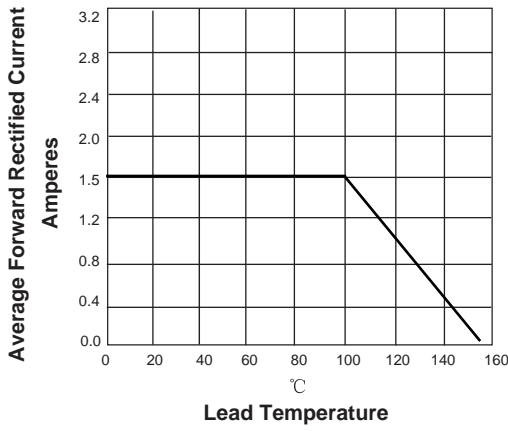


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

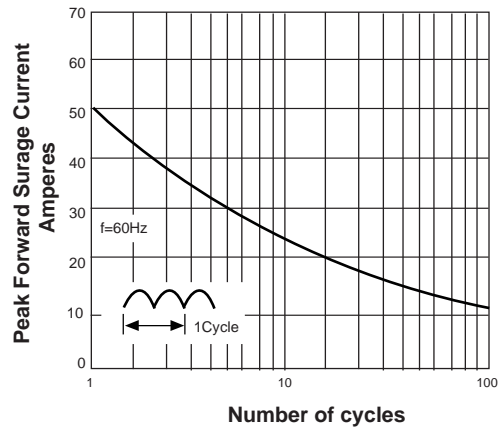


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

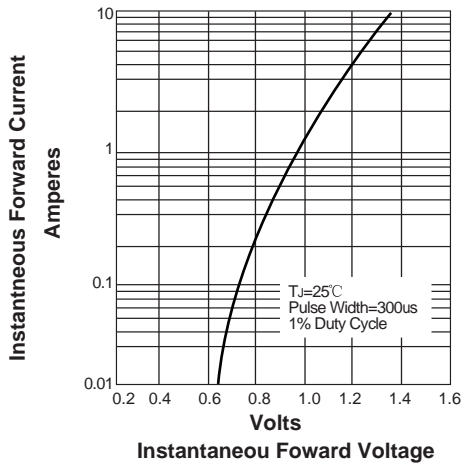
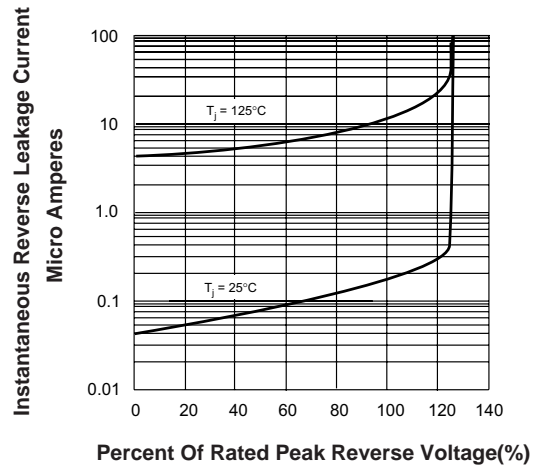
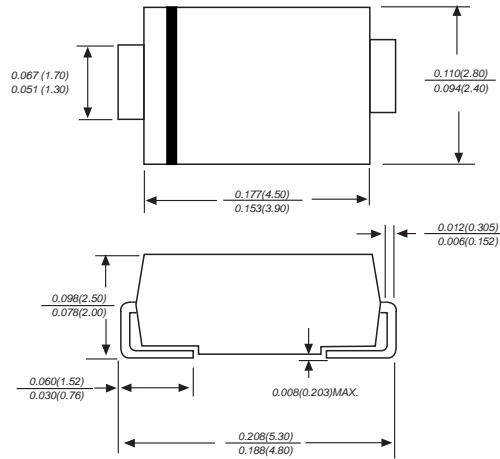


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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