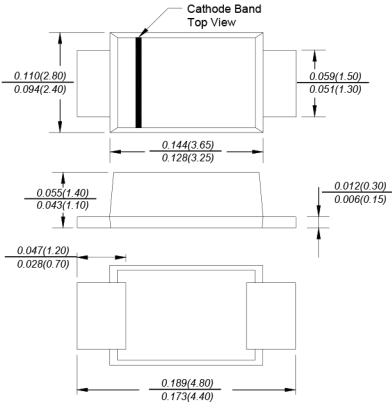


SMAF



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC SMAF molded plastic body
Terminals: leads solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0018 ounce, 0.064 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%.

	SYMBOLS	SS52F	SS53F	SS54F	SS55F	SS56F	SS58F	SS510F	SS5150F	SS5200F	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	VOLTS
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	150	VOLTS
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	VOLTS
Maximum average forward rectified current at T _L (see fig.1)	I _{AV}	5.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	150.0									Amps
Maximum instantaneous forward voltage at 5.0A	V _F	0.55			0.70		0.85			0.95	Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	0.5						0.2		mA	
		20				10		2.0			
Typical junction capacitance (NOTE 1)	C _J	200									pF
Typical thermal resistance (NOTE 2)	R _{θJA}	50.0									°C/W
Operating junction temperature range	T _J	-65 to +125					-65 to +150				°C
Storage temperature range	T _{STG}	-65 to +150									°C

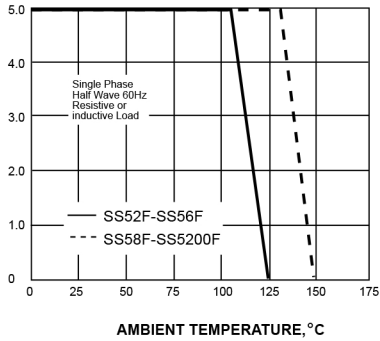
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES SS52F THRU SS5200F

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

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

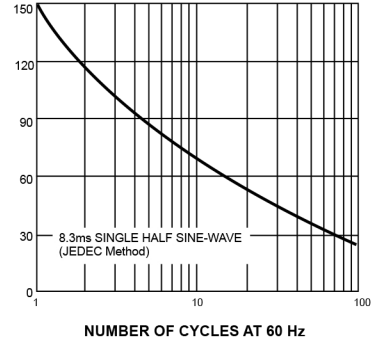
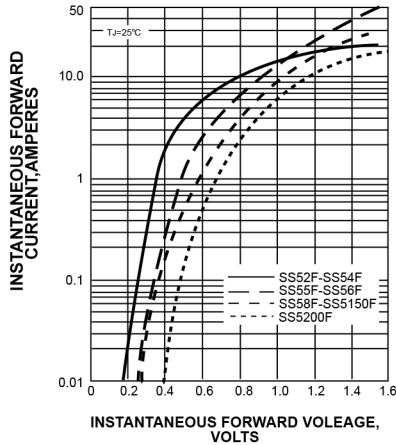


FIG. 3-TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

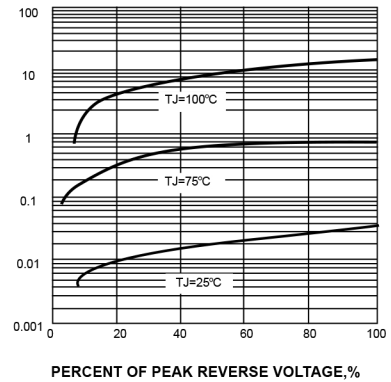
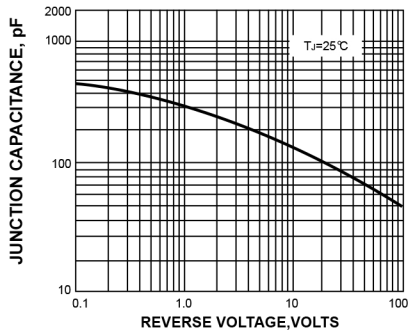


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

