

M1- M7

SURFACE MOUNT RECTIFIER

VOLTAGE-50 to 1000V CURRENT -1.0 Amperes

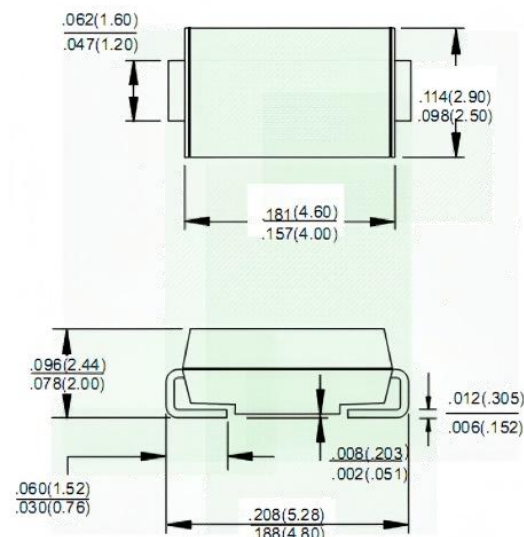
SMA/DO-214AC Unit:inch(mm)

■ FEATURES

- * For surface mounted applications
- * Low reverse leakage
- * Built-in strain relief, ideal for automated placement
- * High forward surge current capability
- * High temperature soldering guaranteed:
260 °C/10 seconds at terminals
- * Glass passivated chip junction

■ MECHANICAL DATA

- * Polarity: Color band denotes cathode end
* Mounting Position: Any



■ BSOLUTE MAXIMUM RATINGS (Ta= 25 °C)

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	M1	M2	M3	M4	M5	M6	M7	UNITS
Maximum repetitive peak reverse voltage		VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage		VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at TL=100C		I(AV)	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load		IFSM	30.0							A
Maximum instantaneous forward voltage at 1.0A		VF	1.1							V
Maximum DC reverse current at Rated DC blocking voltage	TA=25 C TA=100 C	IR	5.0 50.0							μA
Typical junction capacitance (NOTE 1)		CJ	15.0							pF
Typical thermal resistance (NOTE 2)		RθJA	75.0							°C/W
Operating junction and storage temperature range		TJ,TSTG	-55 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

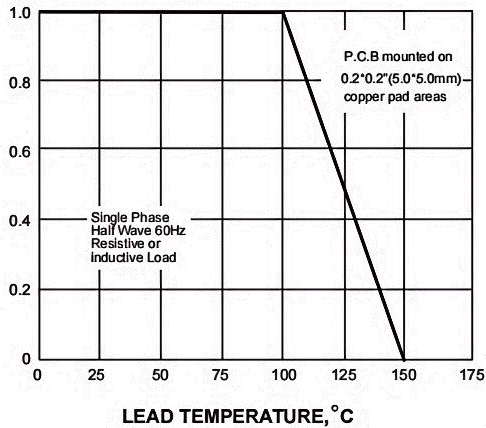


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■ TYPICAL CHARACTERISTICS

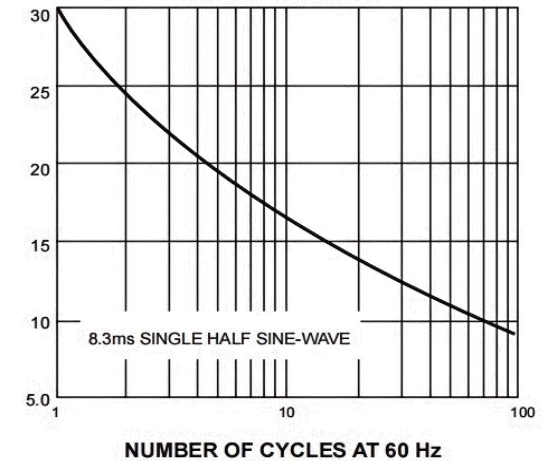
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



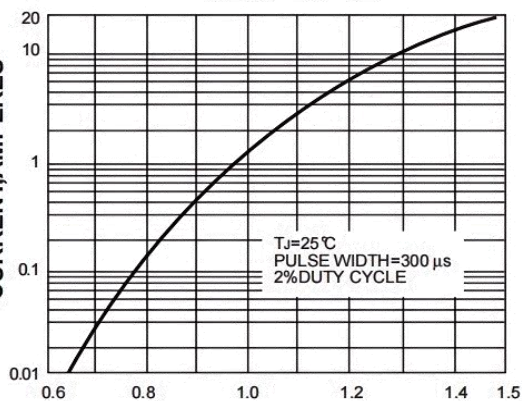
PEAK FORWARD SURGE CURRENT,
AMPERES

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



INSTANTANEOUS FORWARD
CURRENT,AMPERES

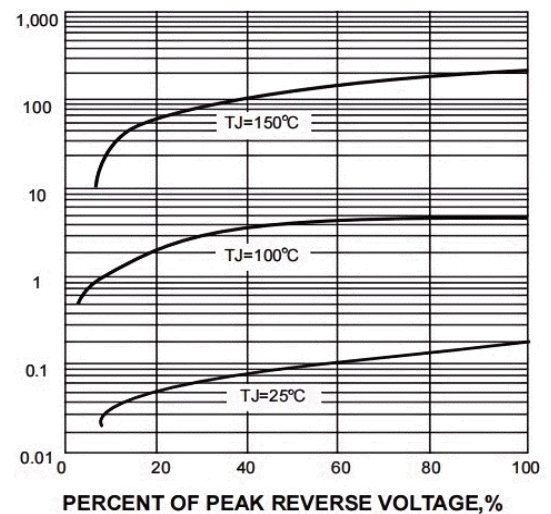
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

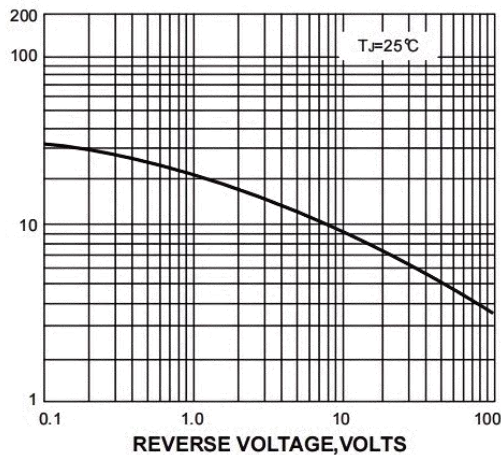
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

