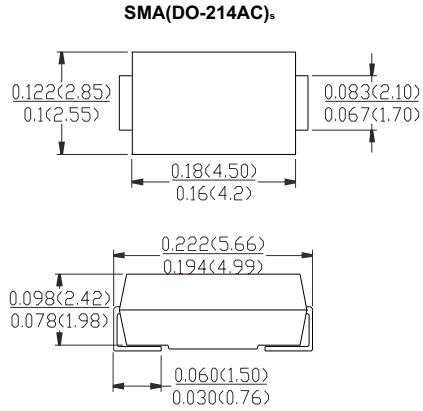
M1 - M7

Voltage Range - 50 to 1000 V
Forward Current - 1 Ampere

SURFACE MOUNT RECTIFIER

FEATURES

- For surface mounted applications in order to optimize board space
- Low profile package
- Built –in strain relief , ideal for automated placement
- Plastic package has underwrites laboratory flammability classification 94v-0
- High temperature soldering guaranteed: 250 ^{o}C/10 seconds at terminals



Dimensions in inches and (millimeters

MECHANICAL DATA

- Case: JEDED SMA(DO-214ACs) molded plastic
- Terminals: Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity: Color band denoles cathode end .
- Mounting Position: Any.
- Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOLS	M1	M2	M3	M4	M5	M6	M7	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, at T_L=50 ^{o}C	I(AV)	1							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage at T_A=25 ^{o}C	I_R	1.0					5.0		µA
		50							
Maximum Reverse Recovery Time(Note2)	TRR	1.8							mS
Maximum Thermal Resistance (Note 1)	R_{QJA}	75.0					85.0		°C/W
	R_{QJL}	27.0					30.0		
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +125							°C

NOTES:

1. Thermal resistance from junction to ambient and from junction to lead mounted on 0.230.2”(5.035.0mm) copper pad areas.
2. Reverse recovery test condition, I_F=0.5A I_R=1.0A I_{RR}=0.25A.

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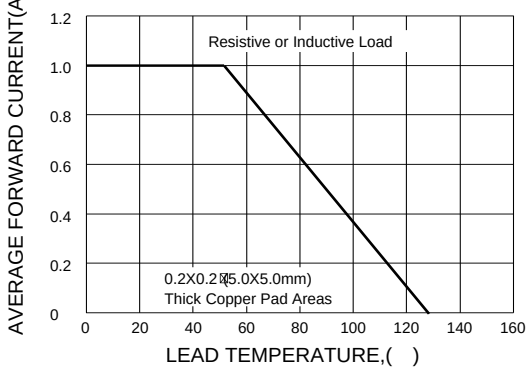
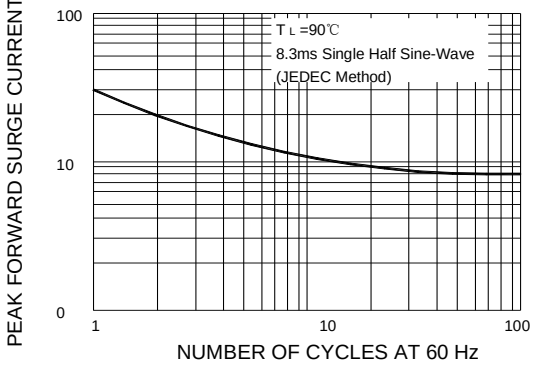
SURFACE MOUNT RECTIFIER

RATINGS AND CHARACTERISTIC CURVES M1 - M7

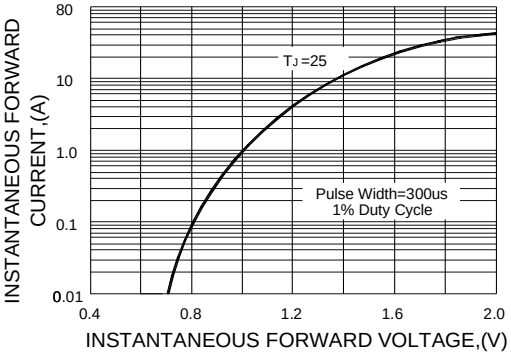
F1G.1-FORWARD CURRENT DERATING CURVE



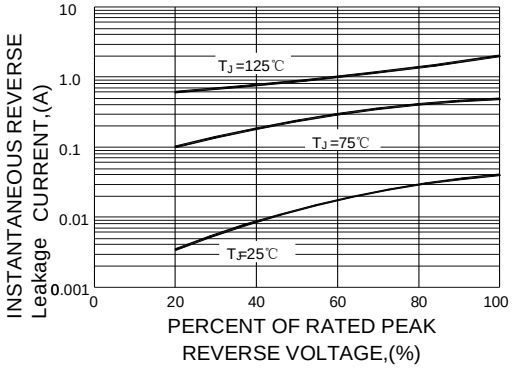
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



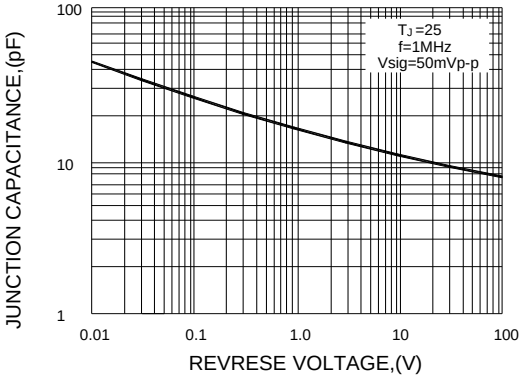
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



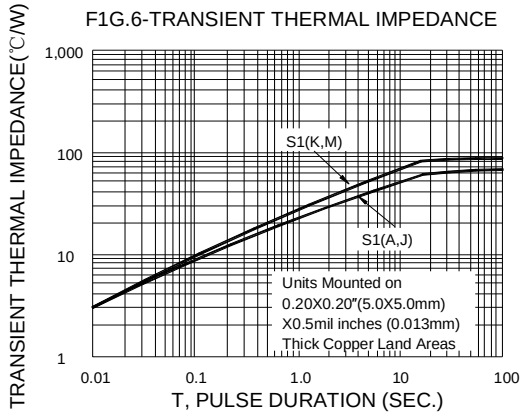
F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TRANSIENT THERMAL IMPEDANCE



Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

Email: sales@micindia.com Website: www.micindia.com