

EM520

1.0AMP. HIGH VOLTAGE SILICON RECTIFIER

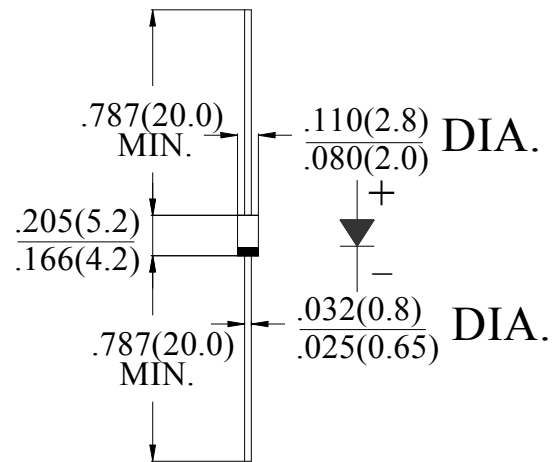
FEATURE

- . High current capability,
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High voltage
- . High temperature soldering guaranteed
260°C /1 0sec/0.375" lead length at 5 lbs tension

MECHANICAL DATA

- . Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any

DO-41



Dimensions in inches and (millimeters)

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, derate current by 20%)

Type Number	SYM BOL	EM520	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	2000	V
Maximum RMS Voltage	V_{RMS}	1400	V
Maximum DC Blocking Voltage	V_{DC}	2000	V
Maximum Average Forward rectified Current at $T_A=50^\circ\text{C}$	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	30	A
Maximum Forward Voltage Drop per element at 1.0 DC	V_F	1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_A=25^\circ\text{C}$	5.0	μA
	@ $T_A=100^\circ\text{C}$	500	
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	3.735	A^2Sec
Typical Junction Capacitance (Note1)	C_J	15	pF
Typical Thermal Resistance (Note 2)	$R_{(JA)}$	40	$^\circ\text{C}/\text{W}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$
Operation Temperature Range	T_J	-55 to +150	$^\circ\text{C}$

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length

RATING AND CHARACTERISTIC CURVES (EM520)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

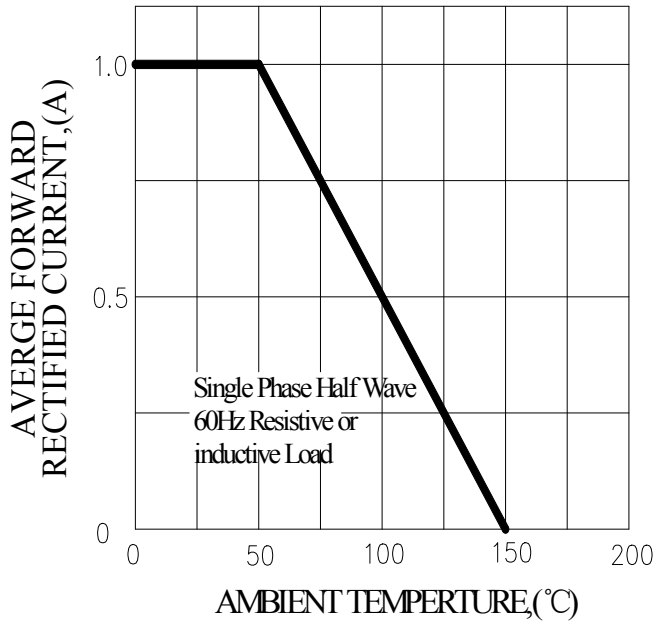


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

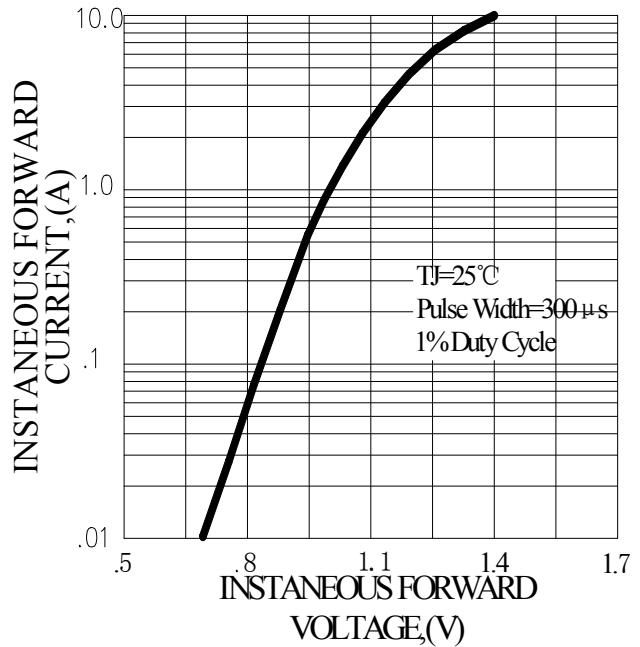


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

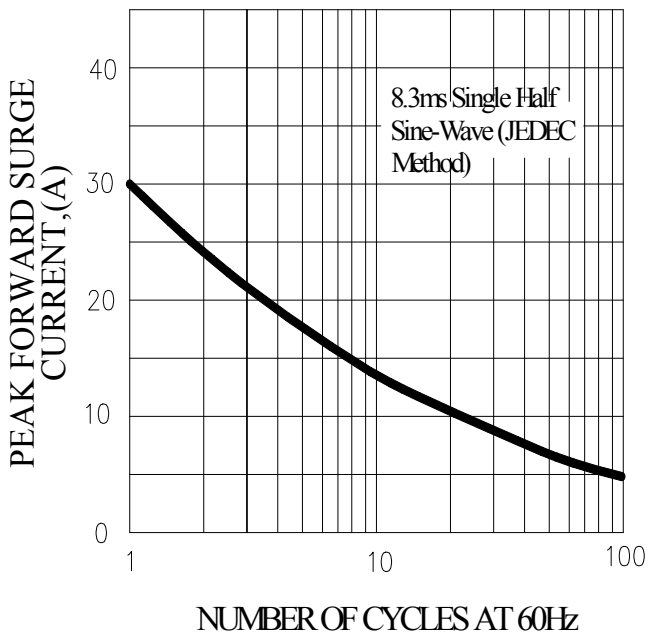
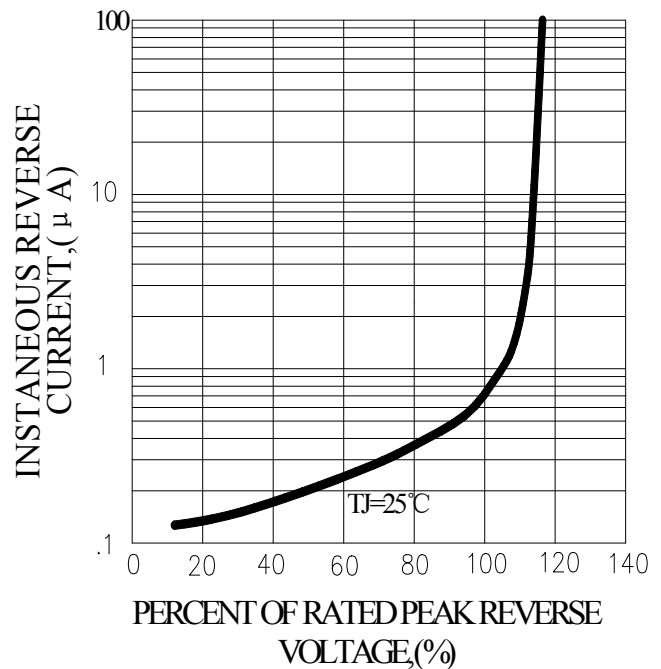


FIG.4-TYPICAL REVERSE CHARACTERISTICS



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