



EM520

Surface Mount Superfast Rectifiers

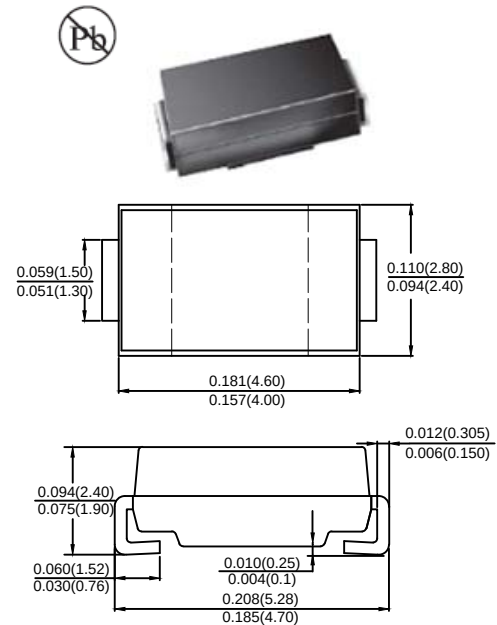
Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Data

- **Case:** JEDEC DO-214AC (SMA) molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

SMA/DO-214AC



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating 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 $T_L=55^\circ\text{C}$	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0	A
Maximum Forward Voltage at 1.0A DC	V_F	1.1	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	5.0 50.0	μA
Typical Junction Capacitance (Note1)	C_J	15	pF
Surge immunity test under IEC 61000-4-5	V_{test}	1	KV
Typical Thermal Resistance (Note 2)	$R_{(JA)}$	50	$^\circ\text{C}/\text{W}$
Storage Temperature	T_{STG}	-55 to +175	$^\circ\text{C}$
Operation Junction Temperature	T_J	-55 to +175	$^\circ\text{C}$

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Measured on P.C.Board with 0.2×0.2"(5.0×5.0mm)Copper Pad Areas.



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

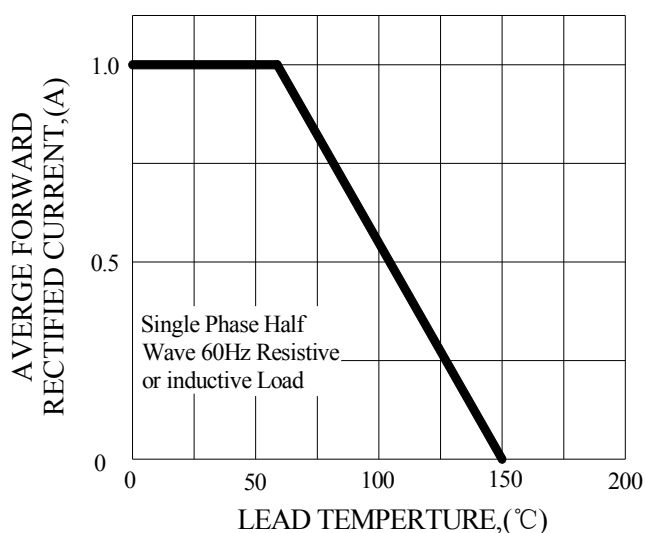


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

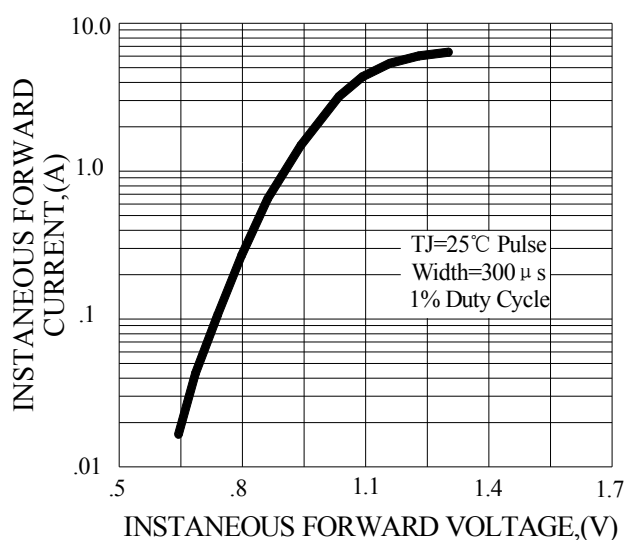


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

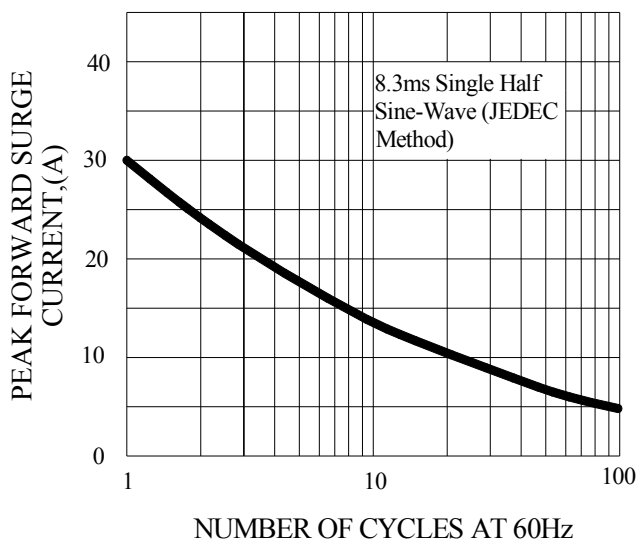


FIG.4-TYPICAL REVERSE CHARACTERISTICS

