

ES5JGB

5.0AMPS. SUPER FAST SURFACE MOUNT RECTIFIER

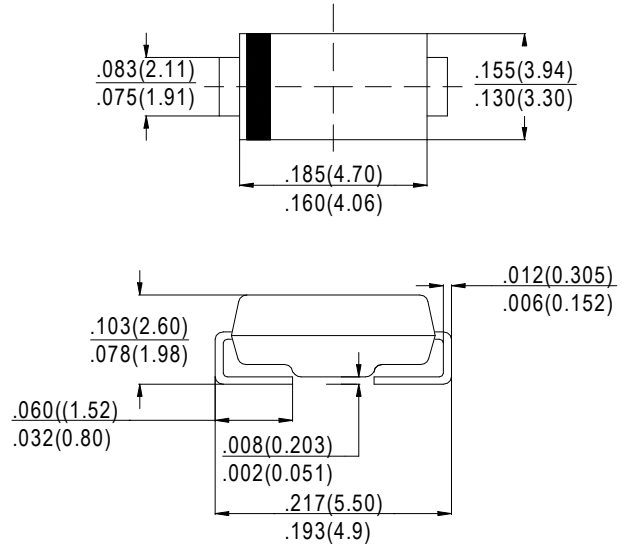
FEATURE

- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed
260°C/10 seconds at terminals.
- . Superfast recovery time for high efficiency
- . For surface mounted application.
- . Easy pick and place.

MECHANICAL DATA

- . Case: Molded plastic
- . Epoxy: UL94V-0 rate flame retardant
- . Lead: MIL-STD- 202E, Method 208 guaranteed
- . Polarity: Color band denotes cathode end
- . Packaging: 12mm tape per EIA STD RS-481
- . Mounting position: Any

SMB (DO-214AA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELETRICAL 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	ES5JGB	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Voltage	V_{RMS}	420	V
Maximum DC blocking Voltage	V_{DC}	600	V
Maximum Average Forward Rectified Current at $T_A=55^{\circ}\text{C}$	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load (JEDEC method)	I_{FSM}	120.0	A
Maximum Forward Voltage at 5.0A DC	V_F	1.7	V
Maximum DC Reverse Current @ $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage @ $T_A=100^{\circ}\text{C}$	I_R	5.0 100.0	μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35	nS
Typical Junction Capacitance (Note 2)	C_J	30	pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	55	$^{\circ}\text{C/W}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Operation Junction Temperature	T_J	-55 to +150	$^{\circ}\text{C}$

Note:

1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Measured on P.C.Board with $0.2 \times 0.2''$ ($5.0 \times 5.0\text{mm}$) Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES (ES5JGB)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

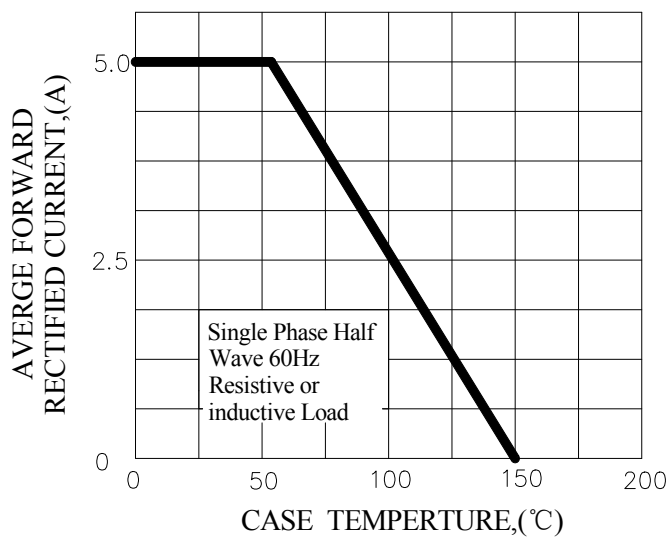


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

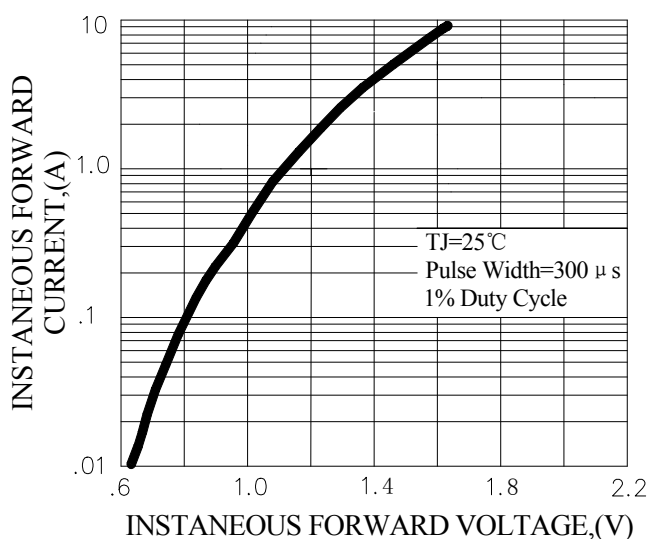


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

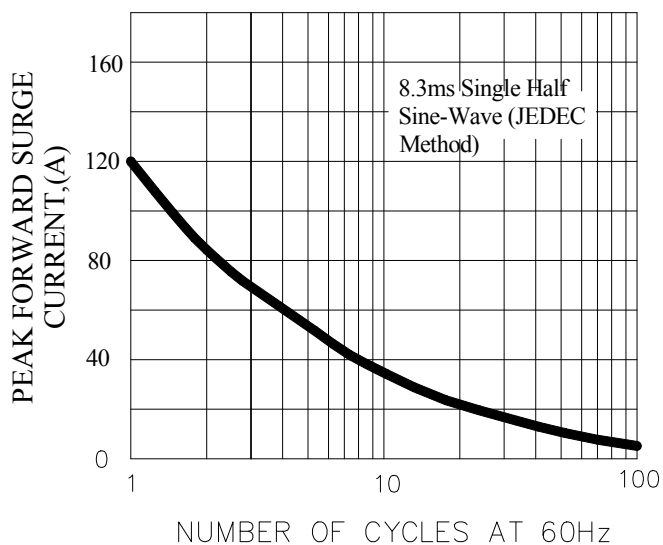


FIG.4-TYPICAL REVERSE CHARACTERISTICS

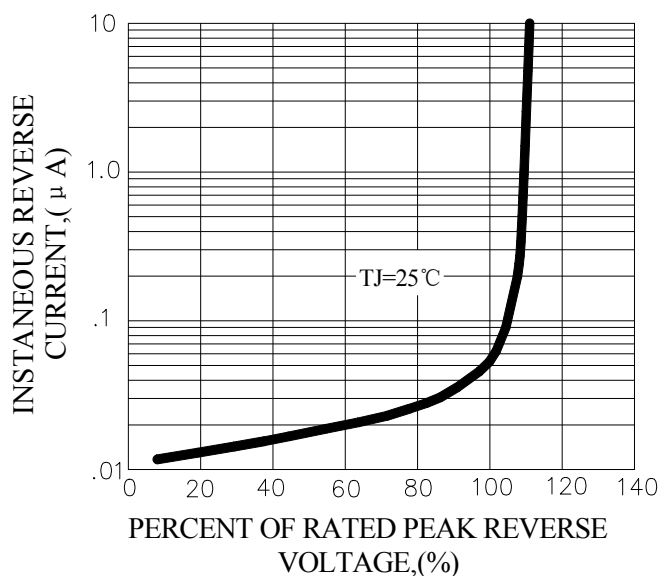


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

