



### FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Lead: Axial leads, solderable per MIL-STD-750, method 2026
- \* Polarity: Polarity symbols marked on case
- \* Marking: SL

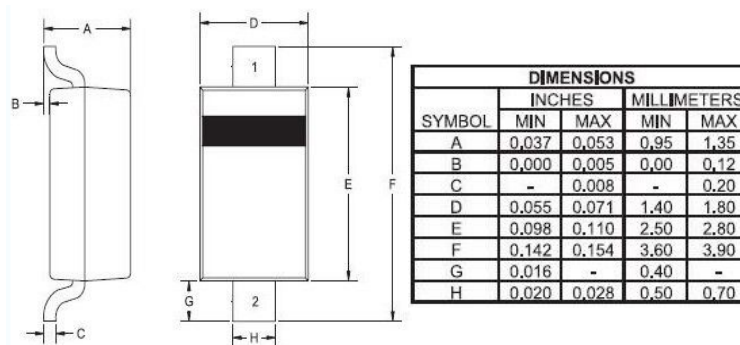
### VOLTAGE RANGE

40 Volts

### CURRENT

1.0 Ampere

SOD123



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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	MBR0530T1G	UNITS
Maximum Recurrent Peak Reverse Voltage	40	V
Maximum RMS Voltage	21	V
Maximum DC Blocking Voltage	40	V
Maximum Average Forward Rectified Current		
See Fig. 1	1.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	9	A
Maximum Instantaneous Forward Voltage at 1.0A	0.58	V
Maximum DC Reverse Current Ta=25°C	0.05	mA
at Rated DC Blocking Voltage Ta=100°C	8	mA
Typical Junction Capacitance (Note1)	30	pF
Typical Thermal Resistance R JA (Note 2)	400	°C/W
Operating Temperature Range Tj	-65 — +125	°C
Storage Temperature Range Tstg	-65 — +150	°C

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES (MBR0530T1G)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

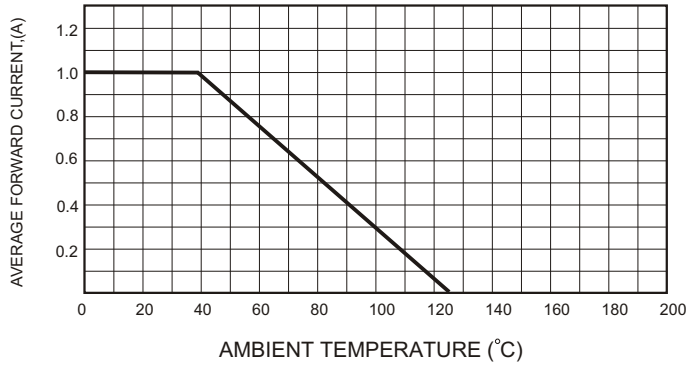


FIG.3 - Power Derating Curve

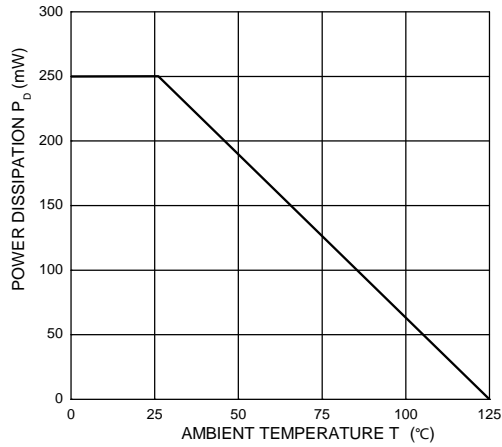


FIG.4-TYPICAL JUNCTION CAPACITANCE

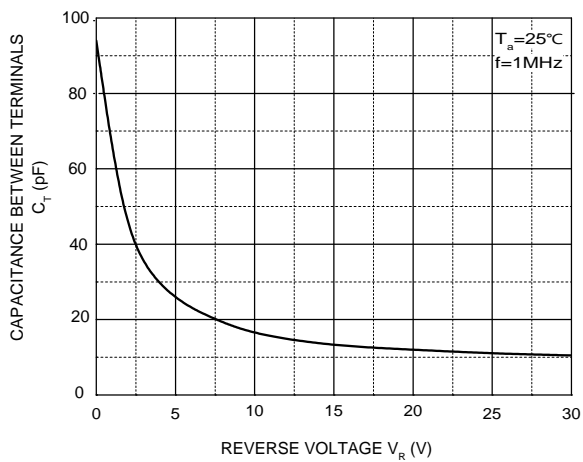


FIG.2-TYPICAL FORWARD CHARACTERISTICS

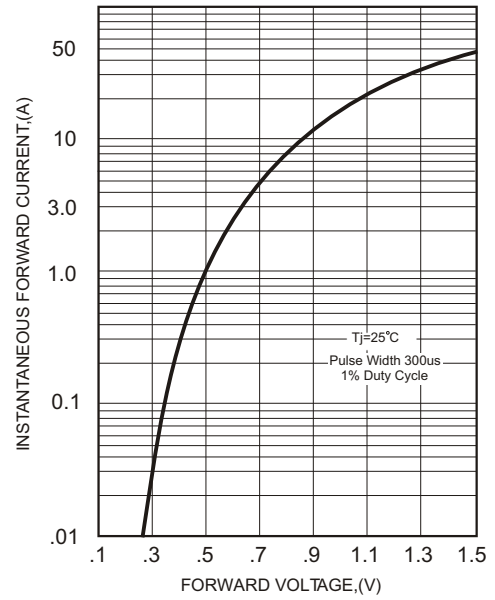


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

