



Features

- ✧ For surface mounted application
- ✧ Easy pick and place
- ✧ Glass passivated junction chip
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Qualified as per AEC-Q101
- ✧ Hideal for automated placement
- ✧ Ultrafast recovery time for high efficiency
- ✧ Low forward voltage, low power loss
- ✧ High temperature soldering guaranteed:
260°C/10 seconds on terminals
- ✧ Plastic material used carriers Underwriters
Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ Green compound with suffix "G" on packaing
code & prefix "G" on datecode

Mechanical Data

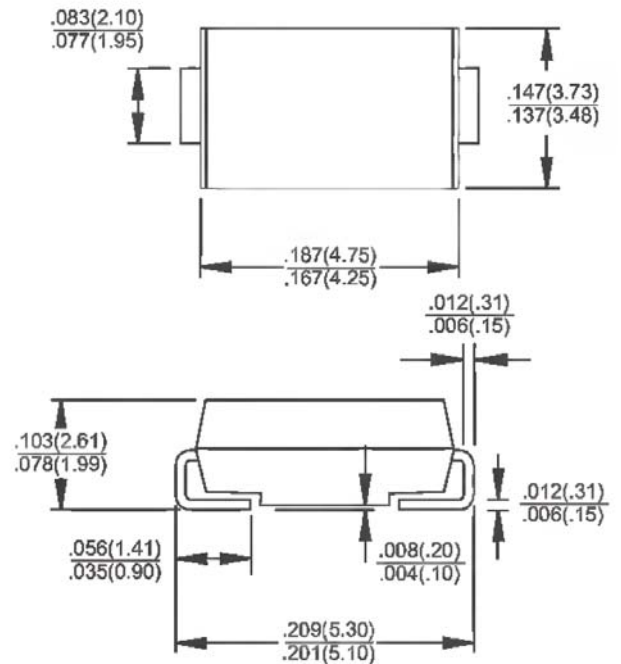
- ✧ Case: SMB/DO-214AA
- ✧ Molding Compound meet UL 94V-0 flammability
rating.
- ✧ Terminals: Pure tin plated, leads free , solderable
per MIL-STD-750, Method 2026
- ✧ Polarity: Indicated by cathode band
- ✧ Weight: 0.097 gram

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

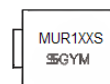
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%



Dimensions in inches and (millimeters)

Marking Diagram



- MUR1XXS = Specific Device Code
- G = Green Compound
- Y = Year
- M = Work Month

| Parameter | Symbol | MUR 105S | MUR 110S | MUR 115S | MUR 120S | MUR 140S | MUR 160S | Unit |
|--|-----------------|----------------|----------|----------|----------|--------------|----------|--------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 150 | 200 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 105 | 140 | 280 | 420 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 150 | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 1 | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load | I_{FSM} | 40 | | | | 35 | | A |
| Maximum Instantaneous Forward Voltage (Pulse test: $t_p=300\mu s$, $\delta < 1\%$) @ $T_a=25^\circ C$ @ $T_a=150^\circ C$ | V_F | 0.875 0.710 | | | | 1.25 1.05 | | V |
| Maximum Reverse Current (Pulse test: $t_p=300\mu s$, $\delta < 1\%$) @ $T_a=25^\circ C$ @ $T_a=150^\circ C$ | I_R | 2.0 50 | | | | 5.0 150 | | μA |
| Max Reverse Recovery Time(Note 1) | T_{rr} | 25 | | | | 50 | | ns |
| Max Reverse Recovery Time(Note 2) | T_{rr} | 35 | | | | 75 | | ns |
| Typical Thermal Resistance (Note 3) | $R_{\theta JL}$ | 17.0 | | | | | | $^\circ C/W$ |
| Operating Temperature Range | T_J | -65 to + 175 | | | | | | $^\circ C$ |
| Storage Temperature Range | T_{STG} | -65 to + 175 | | | | | | $^\circ C$ |

Note1: Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

Note2: Reverse Recovery Test Conditions: $I_F=1A$, $dI/dt=50A/\mu s$, $V_R=30V$, $I_{RR}=10\%I_{RM}$

Note3: Mount on Cu-Pad Size 10.0mm x 10.0mm x 1.6mm on P.C.B

RATINGS AND CHARACTERISTIC CURVES (MUR105S THRU MUR160S)

Fig.1 Maximum Forward Current Derating Curve

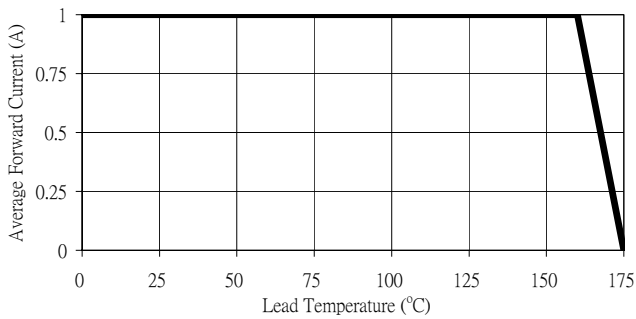


Fig.2 Maximum Non-Repetitive Forward Surge Current Perleg

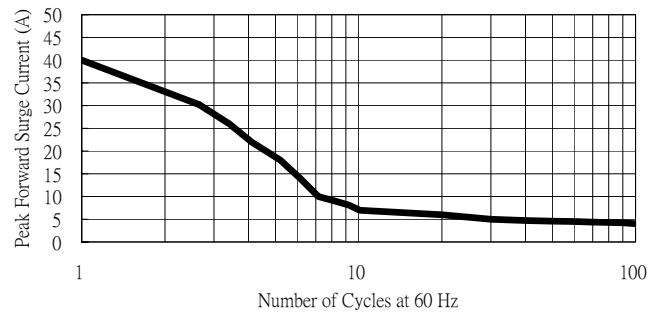


Fig. 3 Typical Forward Characteristics(MUR105S-120S)

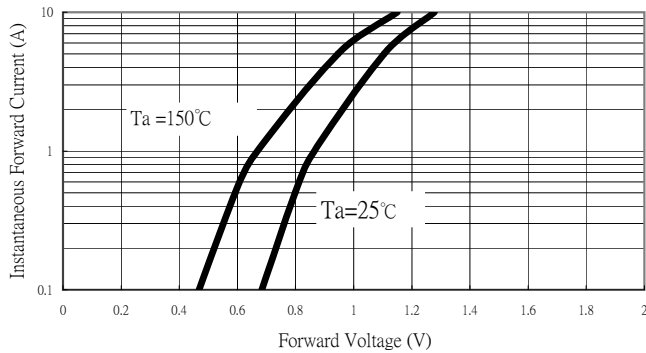


Fig. 4 Typical Forward Characteristic(MUR140S/160S)

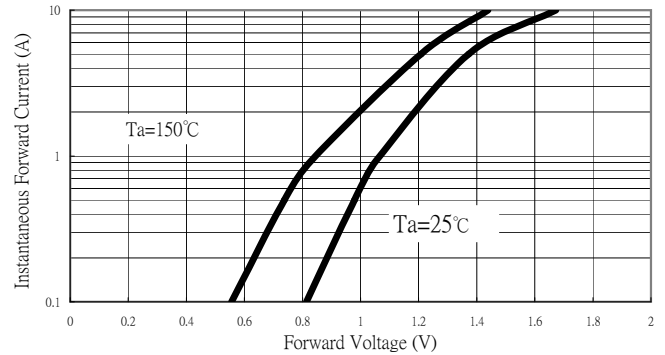


Fig. 5 Maximum Reverse Characteristics(MUR105S-120S)

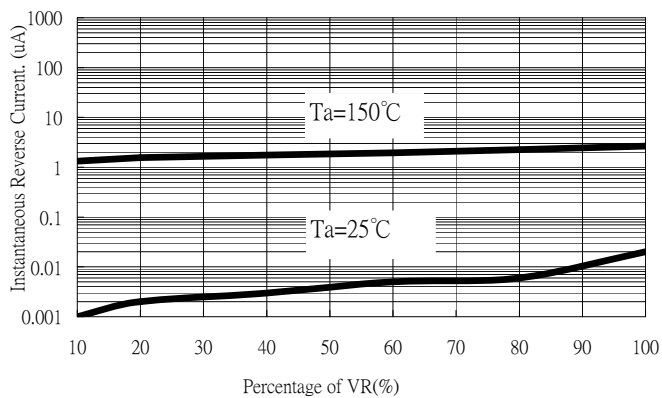


Fig. 6 Maximum Reverse Characteristics (MUR140S/160S)

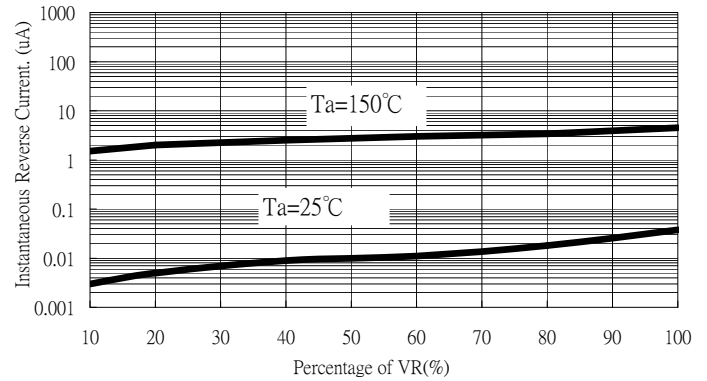


Fig.7 Typical Junction Capacitance

