

MURS3G

Features

- Lead Free Finish/Rohs Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Super Fast Recovery Times With EPI Die For High Efficiency
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance; 25°C/W Junction To Lead
- Typical Thermal Resistance; 35°C/W Junction To Ambient

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage | Working Peak Reverse Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|------------------------------|
| MURS3G | MURS3G | 400V | 280V | 400V | 300V |

Electrical Characteristics @ 25°C Unless Otherwise Specified

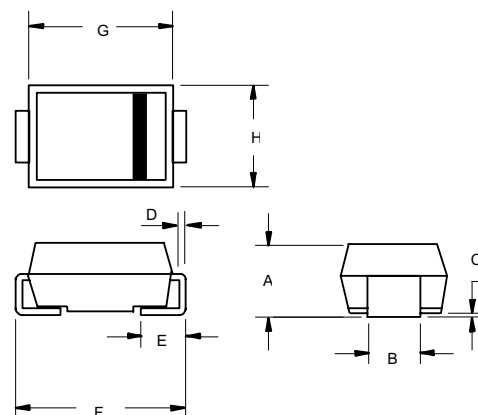
| | | | |
|--|-------------|--------------------------------------|--|
| Average Forward Current | $I_{F(AV)}$ | 3.0A | $T_L = 110^\circ\text{C}$ |
| Peak Forward Surge Current | I_{FSM} | 100A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage | V_F | 1.0V 0.92V(typ) | $I_{FM} = 3.0\text{A};$ $T_J = 25^\circ\text{C}^*$ |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | I_R | 5 μA 350 μA | $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$ |
| Maximum Reverse Recovery Time | T_{rr} | 35ns | $I_F=0.5\text{A}, I_R=1.0\text{A},$ $I_{rr}=0.25\text{A}$ |
| Pulse Energy in Avalanche Mode, Non Repetitive (inductive load switch off) | E_R | 25mJ | $I_{(BR)R}=1\text{A}, T_J=25^\circ\text{C}$ |
| Typical Junction Capacitance | C_J | 40pF | Measured at 1.0MHz, $V_R=4.0\text{V}$ |

*Pulse test: Pulse width 300 μsec , Duty cycle 2%

1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a

3 Amp Super Fast Recovery Rectifier 400 Volts

DO-214AB (SMC) (LEAD FRAME)



| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | .079 | .103 | 2.00 | 2.62 | |
| B | .108 | .128 | 2.75 | 3.25 | |
| C | .002 | .008 | 0.051 | 0.203 | |
| D | .006 | .012 | 0.152 | 0.305 | |
| E | .030 | .060 | 0.76 | 1.52 | |
| F | .305 | .320 | 7.75 | 8.13 | |
| G | .260 | .280 | 6.60 | 7.11 | |
| H | .220 | .245 | 5.59 | 6.22 | |

SUGGESTED SOLDER PAD LAYOUT

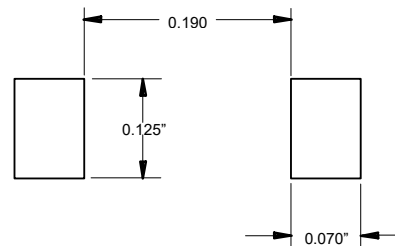


Figure 1
Typical Forward Characteristics

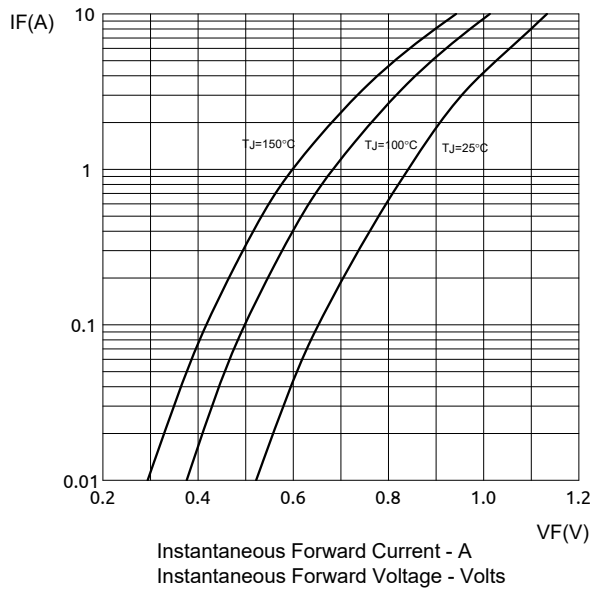


Figure 2
Forward Derating Curve

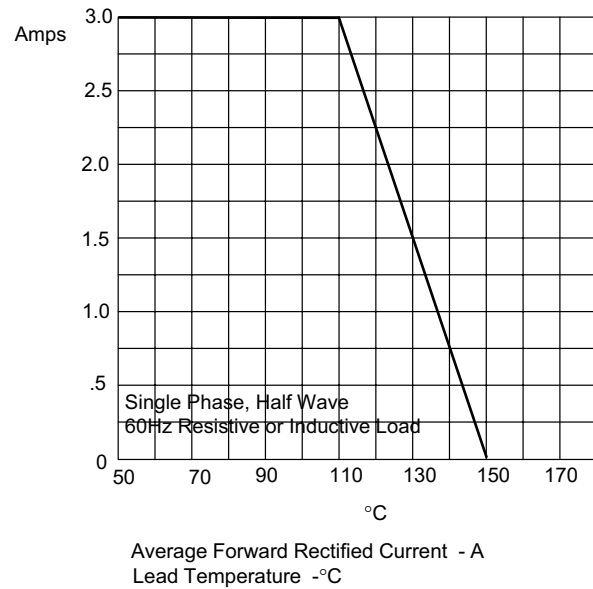


Figure 3
Typical Junction Capacitance

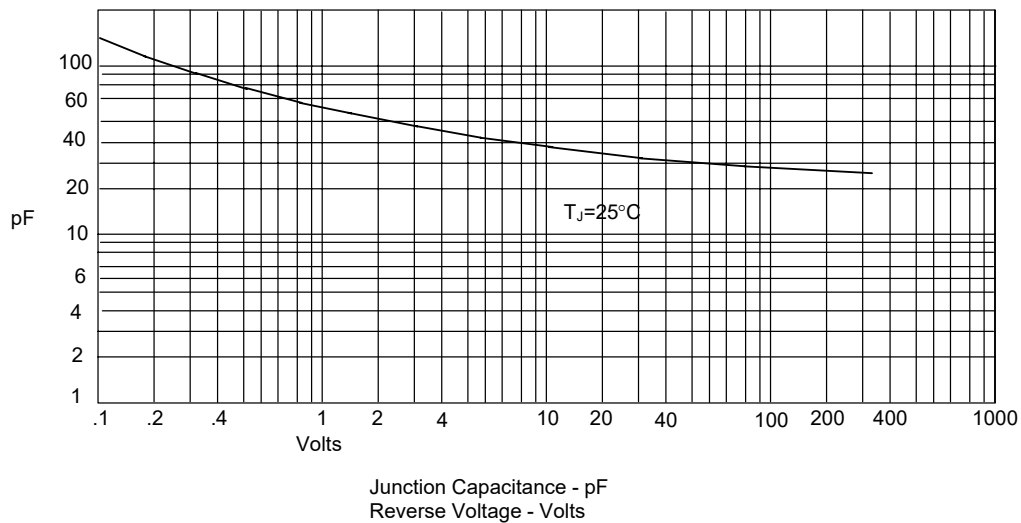
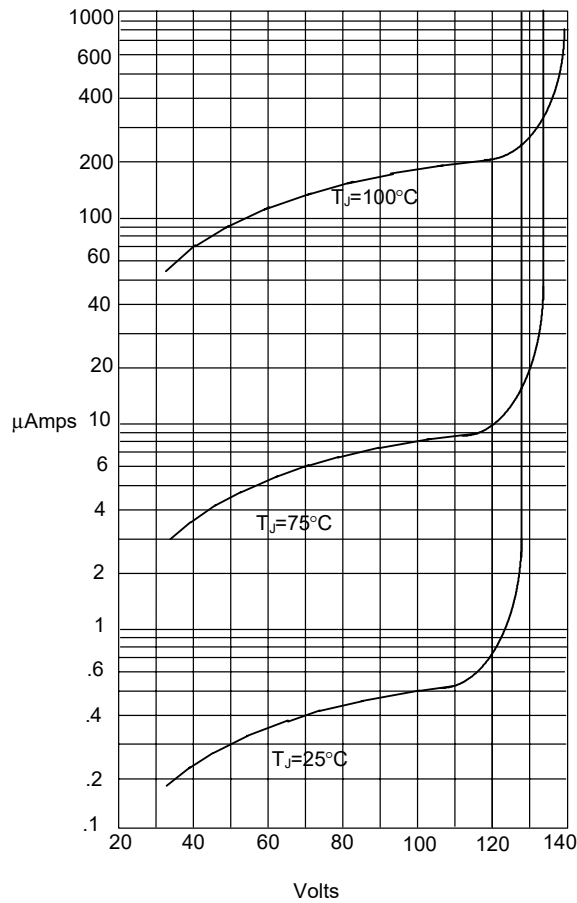
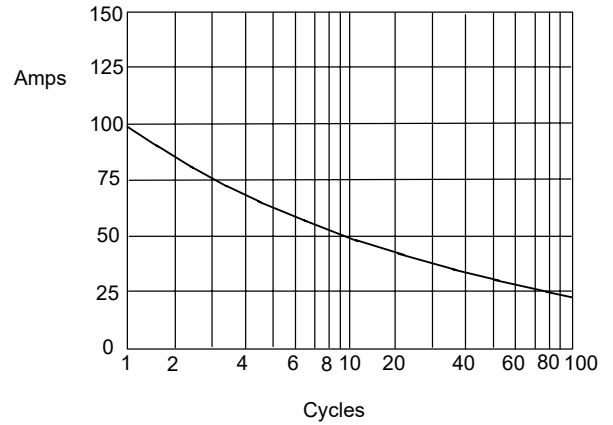


Figure 4
Typical Reverse Characteristics



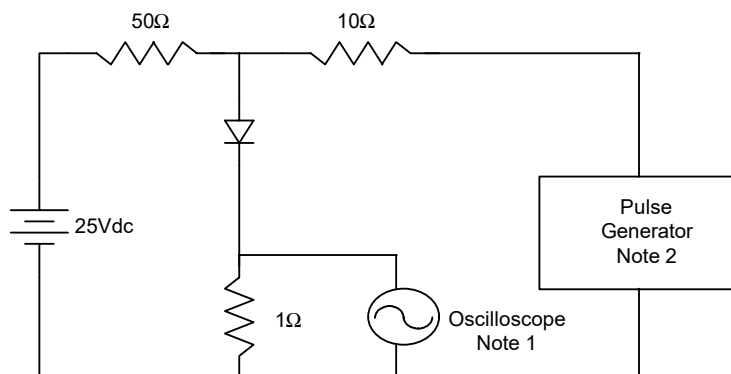
Instantaneous Reverse Leakage Current - μA
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current

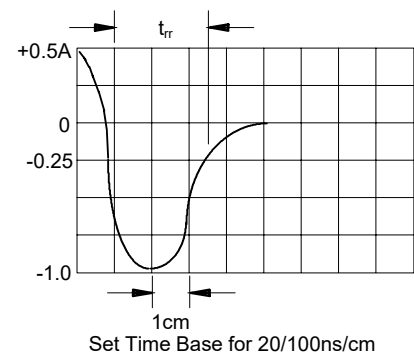


Peak Forward Surge Current - A
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



- Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
 2. Rise Time = 10ns max.
Source impedance = 50 ohms
 3. Resistors are non-inductive





Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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