Pb Free Plating Product

# MURF3020PT/MURF3040PT/MURF3060PT

30 Ampere Insulated Dual Common Cathode Fast Recovery Half Bridge Rectifiers

**Features**

- ✶ Latest GPP technology with super fast recovery time
- ✶ Low forward voltage drop
- ✶ High current capability
- ✶ Low reverse leakage current
- ✶ High surge current capability

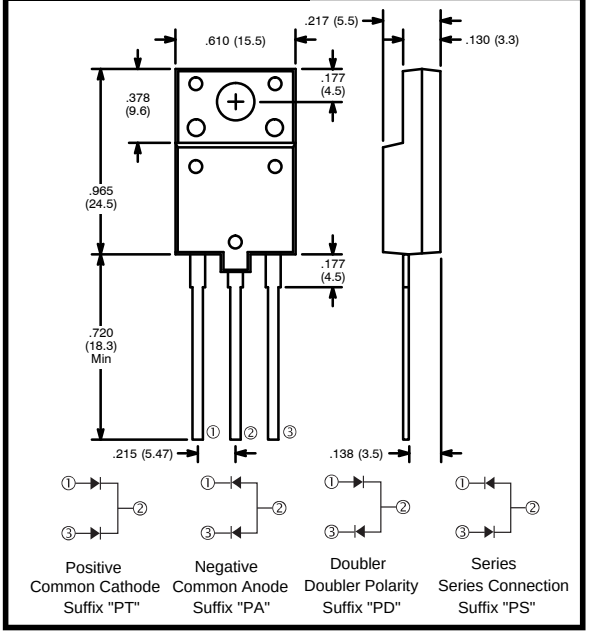
Application

- ✶ Automotive Inverters/Solar Inverters
- ✶ Plating Power Supply,SMPS,Adapter and UPS
- ✶ Car Audio Amplifiers and Sound Device Systems

**Mechanical Data**

- ✶ Case: TO-3P(H)IS/TO-3PF isolated
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-202 method 208
- ✶ Polarity: As marked on diode body
- ✶ Mounting position: Any
- ✶ Weight: 5.6 gram approximately

TO-3PF/TO-3P(H)IS Unit : inch (mm)




## MAXIMUM RATINGS AND ELECTRICAL 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%.

| | SYMBOL | MURF3020PT | MURF3040PT | MURF3060PT | UNIT |
|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 200 | 400 | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current $T_C$=125°C | $I_{F(AV)}$ | 30.0 | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 300 | | | A |
| Maximum Instantaneous Forward Voltage @ 15.0 A | $V_F$ | 0.98 | 1.3 | 1.7 | V |
| Maximum DC Reverse Current @$T_J$=25°C<br>At Rated DC Blocking Voltage @$T_J$=125°C | $I_R$ | 10<br>500 | | | uA<br>uA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 35-50 | | | nS |
| Typical junction Capacitance (Note 2) | $C_J$ | 150 | | | pF |
| Operating Junction and Storage Temperature Range | $T_J$, $T_{STG}$ | -55 to +150 | | | °C |

NOTES : (1) Reverse recovery test conditions $I_F$ = 0.5A $I_R$ = 1.0A Irr = 0.25A.
(2) Thermal Resistance junction to terminal.
(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.



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FIG.1 - FORWARD CURRENT DERATING CURVE

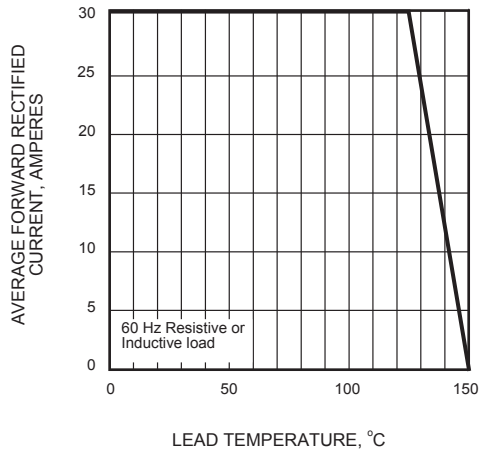



FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

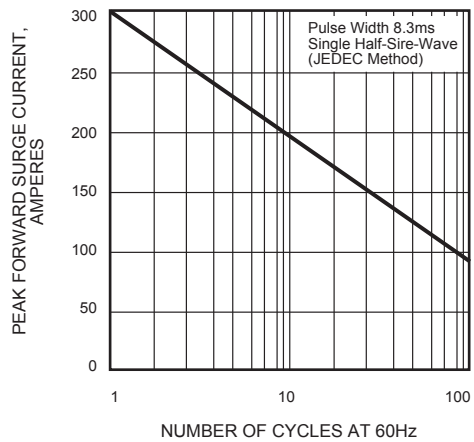



FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

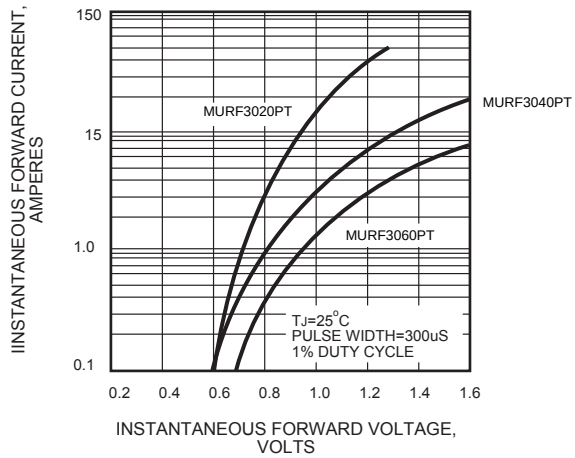



FIG.4 - TYPICAL REVERSE CHARACTERISTICS

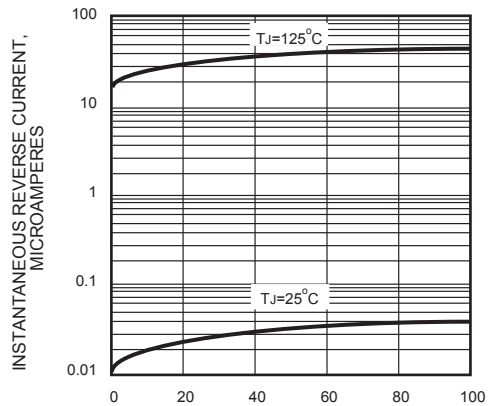
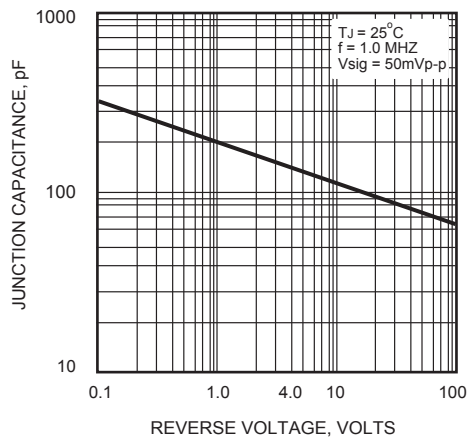



FIG.5 - TYPICAL JUNCTION CAPACITANCE





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