

Pb Free Plating Product

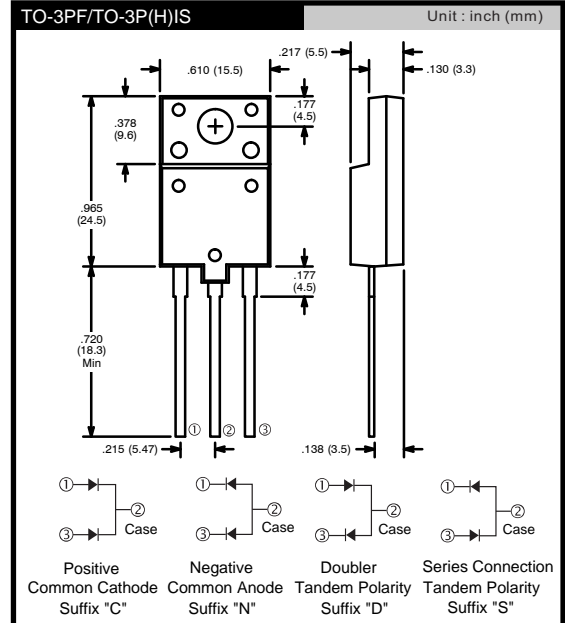
ESAD39M-02C/ESAD39M-04C/ESAD39M-06C



10 Ampere Insulated Common Cathode Ultra Fast Recovery Half Bridge Rectifiers

- Features**
- ★ Latest GPP technology with super fast recovery time
 - ★ Low forward voltage drop
 - ★ Glass passivated with high current capability
 - ★ Low reverse leakage current
 - ★ High surge current capability
- Application**
- ★ Automotive Inverters/Solar Inverters
 - ★ Plating Power Supply, SMPS, Motor Control and UPS
 - ★ Car Audio Amplifiers and Sound Device Systems

- Mechanical Data**
- ★ Case: TO-3PF isolated package by fully molding
 - ★ 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: 6.0 gram approximately



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 | ESAD39M-02C | ESAD39M-04C | ESAD39M-06C | UNIT |
|---|----------|-------------|-------------|-------------|------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 200 | 400 | 600 | V |
| Maximum RMS Voltage | VRMS | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | VDC | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current Tc=100°C | IF(AV) | 10.0 | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | IFSM | 100 | | | A |
| Maximum Instantaneous Forward Voltage @ 5.0 A | VF | 0.98 | 1.3 | 1.7 | V |
| Maximum DC Reverse Current @Tj=25°C At Rated DC Blocking Voltage @Tj=125°C | IR | 5.0 | | | uA |
| | | 100 | | | uA |
| Maximum Reverse Recovery Time (Note 1) | Trr | 35 | | | nS |
| Typical junction Capacitance (Note 2) | CJ | 65 | | | pF |
| Typical Thermal Resistance (Note 3) | RθJC | 2.2 | | | °C/W |
| Operating Junction and Storage Temperature Range | TJ, TSTG | -55 to +150 | | | °C |

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

FIG.1 - FORWARD CURRENT DERATING CURVE

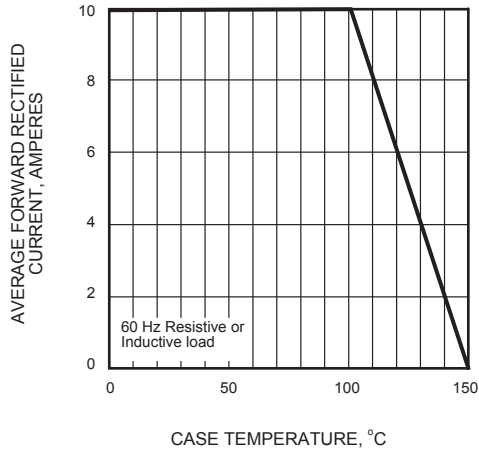


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

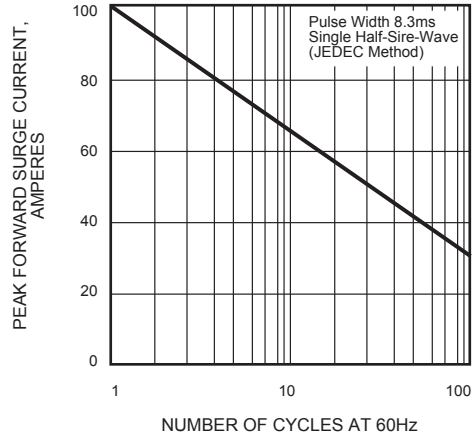


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

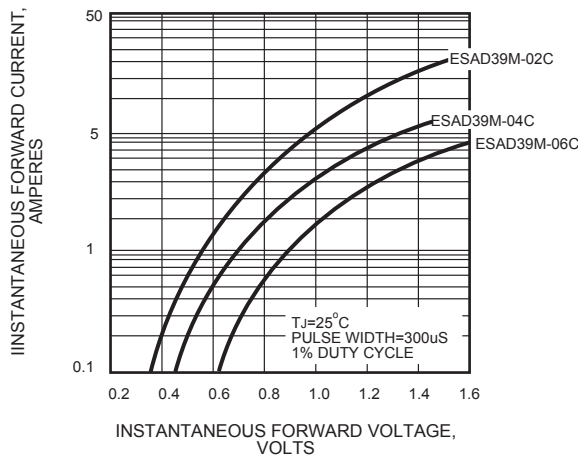


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

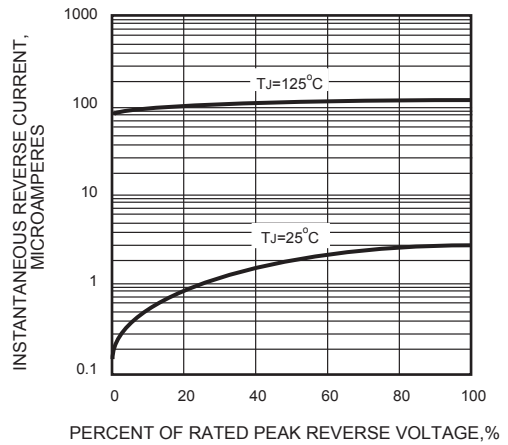


FIG.5 - TYPICAL JUNCTION CAPACITANCE

