

Pb Free Plating Product

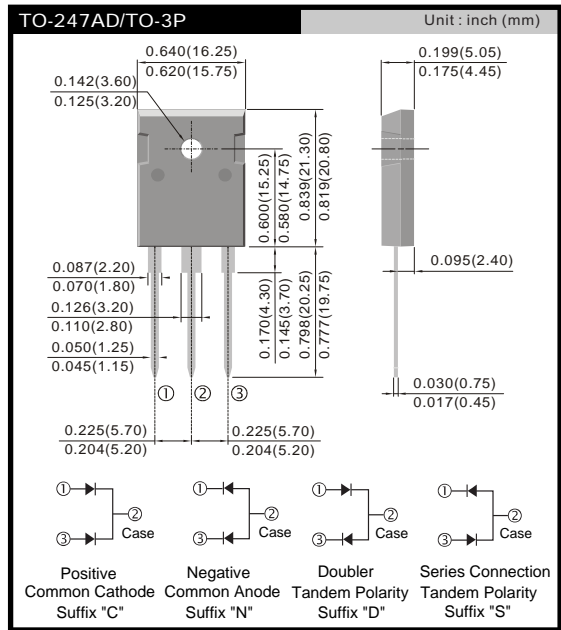
ESAD33-02C/ESAD33-02N



16 Ampere Heatsink Unipolar 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: Heatsink TO-3P/TO-247AD
 - ★ 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



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%.

| RATING | SYMBOL | ESAD33-02C/ESAD33-02N | UNIT |
|---|--------------------|------------------------------------|------|
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | 200 | V |
| Maximum Working Reverse Voltage | V _{RWM} | 200 | V |
| Maximum DC Blocking Voltage | V _{DC} | 200 | V |
| Maximum Average Forward Current Total Device, (Rated V _R), T _c = 150°C | I _{F(AV)} | 8.0 (Per Leg) 16 (Total Device) | A |
| Maximum Peak Rectified Forward Current (Rated V _R , Square Wave, 20 kHz) T _c = 150°C | I _{FRM} | 16 | A |
| Maximum Non-repetitive Peak Forward Surge Current (Halfwave, single phase, 60 Hz) Per Leg | I _{FSM} | 100 | A |
| Maximum Forward Voltage at I _F = 8 A, T _c = 25°C | V _F | 0.975 ⁽¹⁾ | V |
| Maximum Instantaneous Reverse Current ⁽¹⁾ (Rated dc Voltage) | I _R | 5 (T _c = 25°C) | μA |
| | I _{R(H)} | 250 (T _c = 150°C) | μA |
| Maximum Reverse Recovery Time (I _F = 0.5A, I _R = 1A ; I _{rr} = 0.25 A) | T _{rr} | 25~35 | ns |
| Maximum Thermal Resistance, Junction to Case | R _{θJC} | 3.0 | °C/W |
| Junction Temperature Range | T _J | - 65 to + 175 | °C |
| Storage Temperature Range | T _{STG} | - 65 to + 175 | °C |

Note :
 (1) Pulse Test : Pulse Width = 300 μs Duty Cycle ≤ 2 0%

RATING AND CHARACTERISTIC CURVES (ESAD33-02C/ESAD33-02N)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

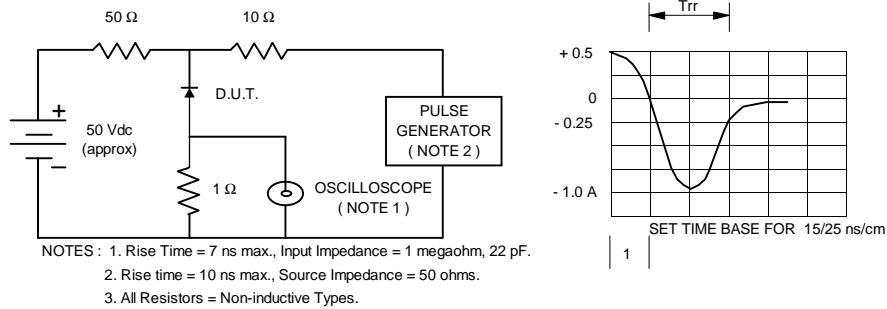


FIG. 2 - CURRENT DERATING CASE, PER LEG

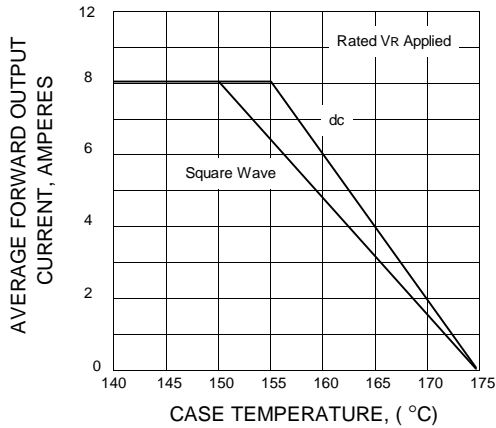


FIG. 3 - POWER DISSIPATION, PER LEG

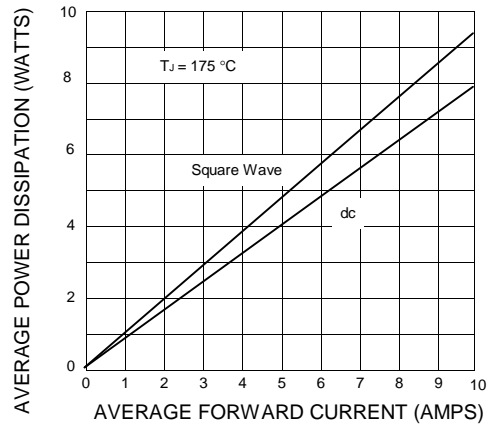


FIG. 4 - TYPICAL FORWARD VOLTAGE, PER LEG

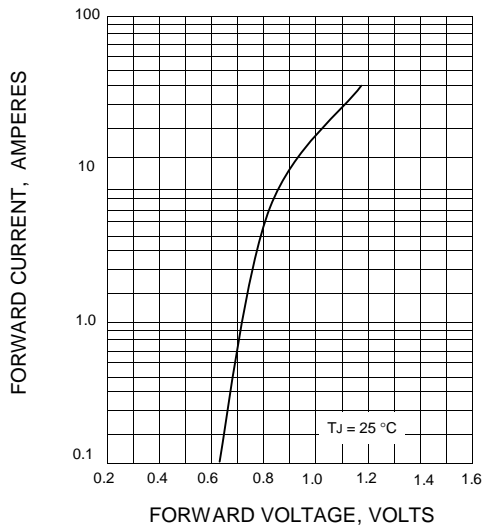


FIG. 5 - TYPICAL REVERSE CURRENT, PER LEG

