

Pb Free Plating Product

ESAC25M-02S/ESAC25M-04S/ESAC25M-06S



10 Ampere Insulated Tandem Polarity Fast Recovery Half Bridge Rectifiers

Features

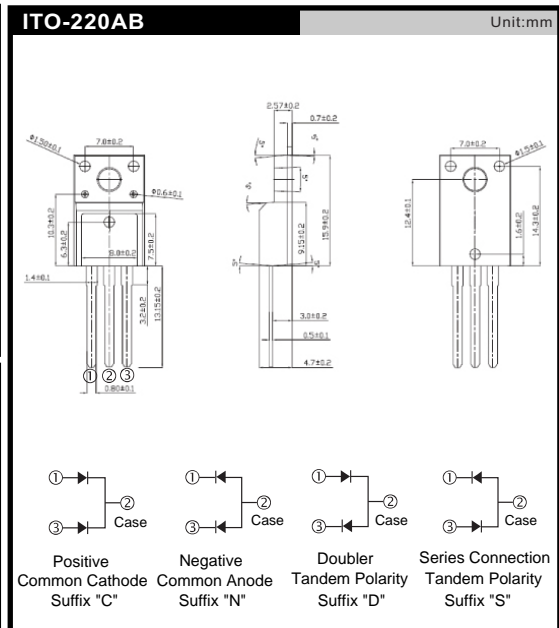
- ★ Latest GPP technology with super fast recovery time
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS, EPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ★ Case: Fully Isolated Molding TO-220FP
- ★ 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: 2.0 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 | ESAC25M-02S | ESAC25M-04S | ESAC25M-06S | 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 =100°C | I _{F(AV)} | 10.0 | | | A |
| Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 100 | | | A |
| Maximum Instantaneous Forward Voltage @ 5.0 A | V _F | 0.98 | 1.3 | 1.7 | V |
| Maximum DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =125°C | I _R | 5.0 100 | | | uA uA |
| Maximum Reverse Recovery Time (Note 1) | T _{rr} | 35 | | | nS |
| Typical junction Capacitance (Note 2) | C _J | 65 | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJC} | 2.2 | | | °C/W |
| 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, I_{rr} = 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

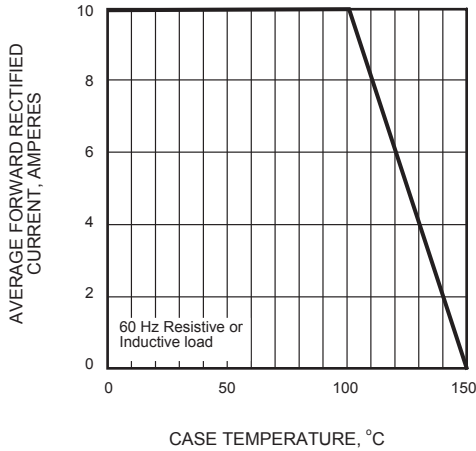


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

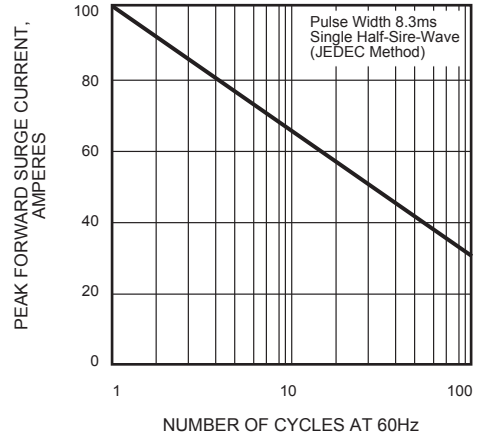


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

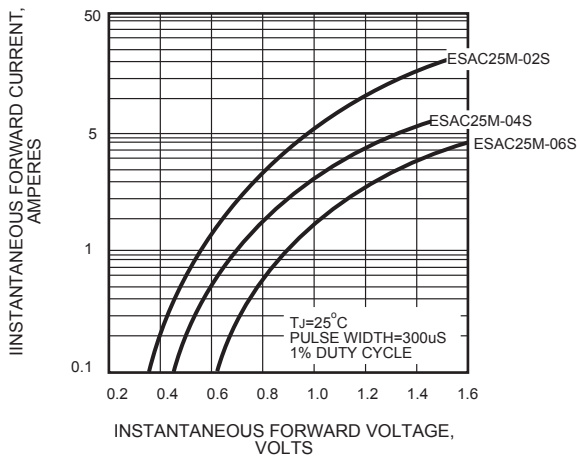


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

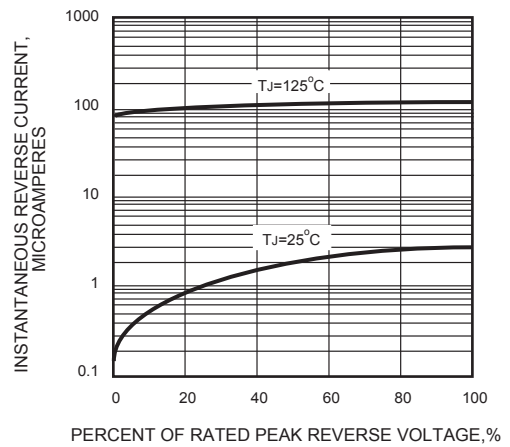


FIG.5 - TYPICAL JUNCTION CAPACITANCE

