

Pb Free Plating Product

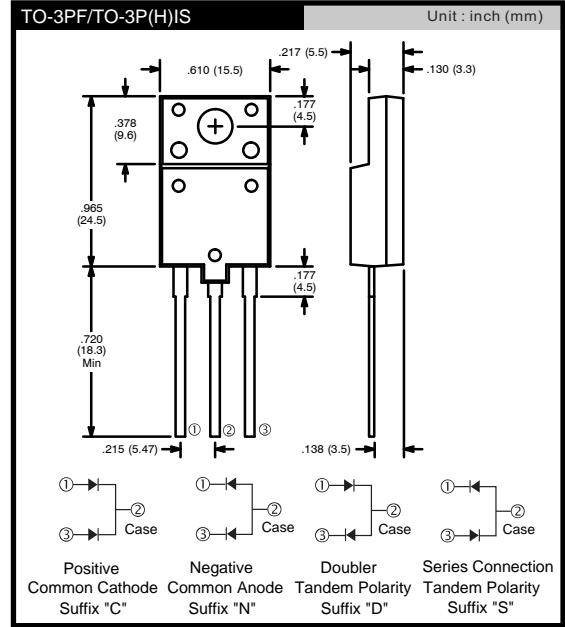
ESAD39M-02D/ESAD39M-04D/ESAD39M-06D



10 Ampere Insulated Tandem Polarity 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-02D	ESAD39M-04D	ESAD39M-06D	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

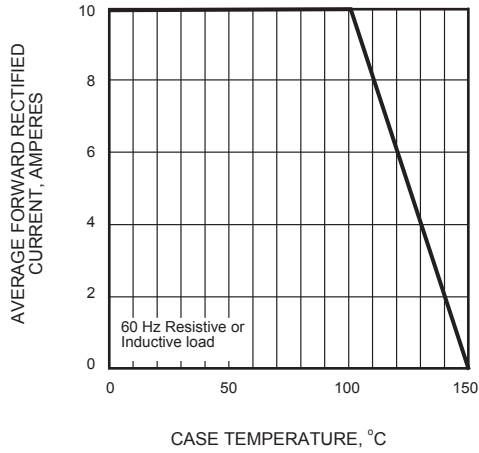


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

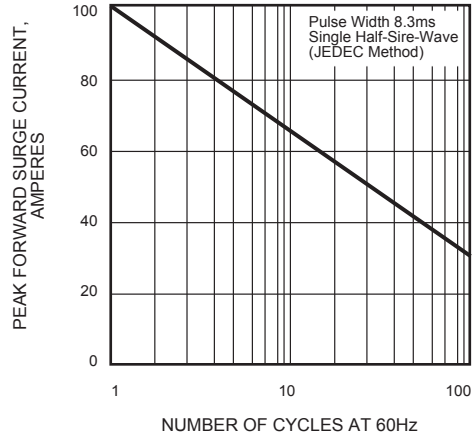


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

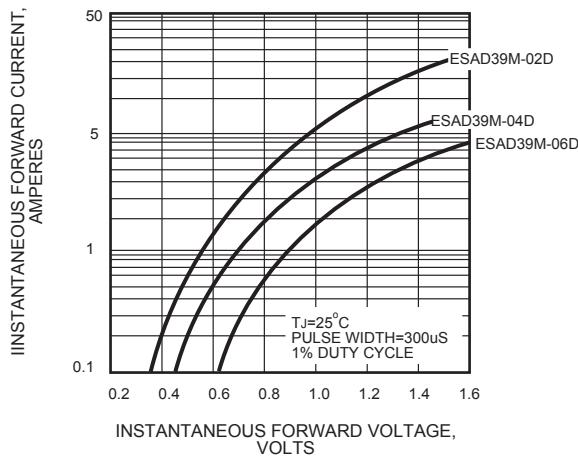


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

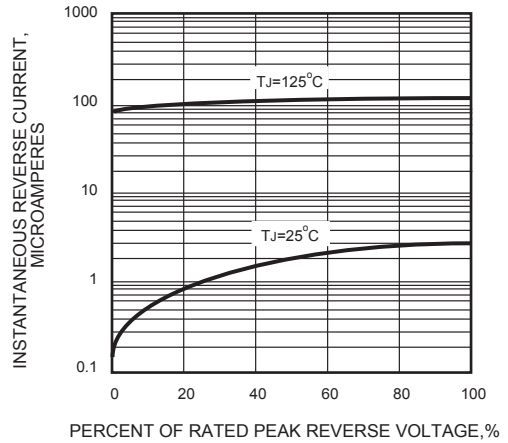


FIG.5 - TYPICAL JUNCTION CAPACITANCE

