UESP12J

Ultra fast Plastic Power Rectifiers

VOLTAGE: 600V **CURRENT:12.0A**

GULF SEMI

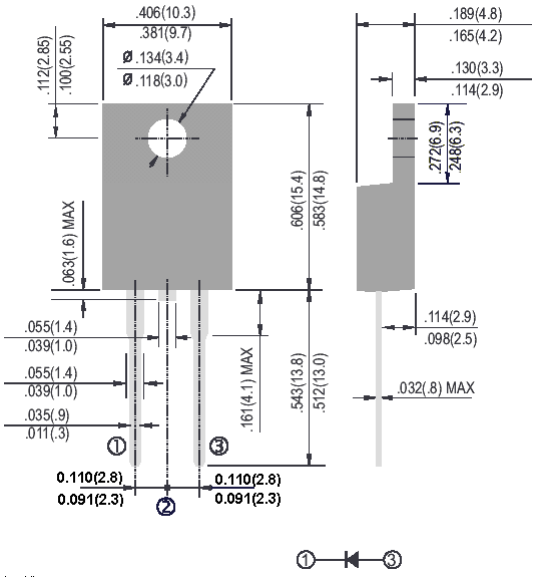
FEATURE

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultra fast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- High voltage and high reliability
- High speed switching
- Low forward voltage

MECHANICAL DATA

Case: JEDEC TO-220 molded plastic body over passivated chip
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any

ITO-220AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	UESP12J	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	600	V
Maximum RMS Voltage	Vrms	420	V
Maximum DC blocking Voltage	Vdc	600	V
Maximum Average Forward Rectified	If(av)	12.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	135	A
Maximum Forward Voltage at rated Forward Current and 25°C at 12A	Vf	1.75	V
Maximum Reverse Recovery Time (Note 1)	Trr	30	nS
Typical thermal resistance junction to case	$R_{\theta Jc}$	3.04	℃/W
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =125°C	Ir	30 4.0	μA mA
Storage and Operating Temperature Range	Tstg, Tj	-55 to +150	°C

Note:

1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A

RATINGS AND CHARACTERISTIC CURVES UESP12J

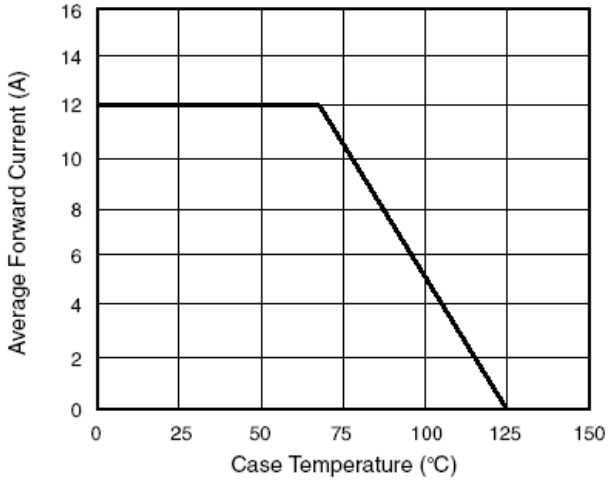


Figure 1. Forward Current Derating Curve

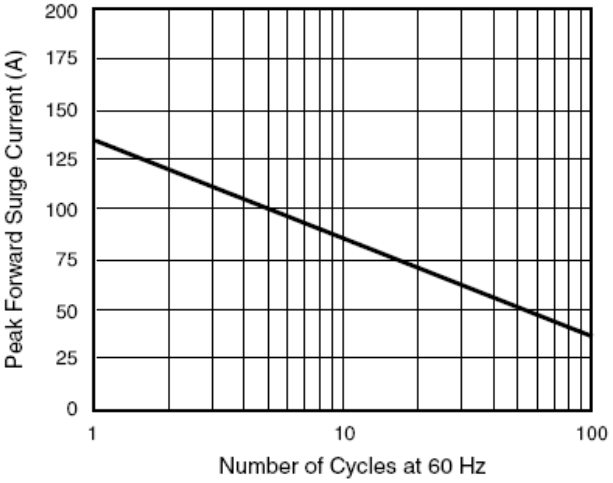


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

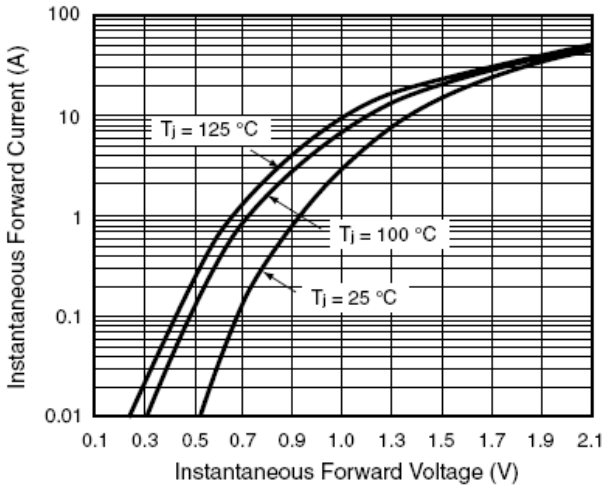


Figure 3. Typical Instantaneous Forward Characteristics Per Leg

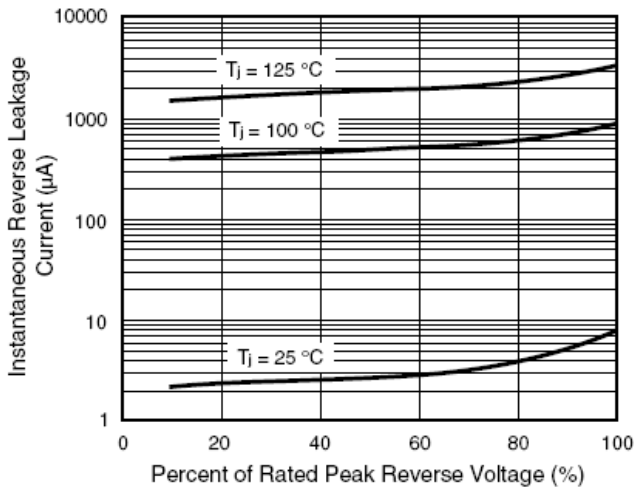


Figure 4. Typical Reverse Leakage Characteristics Per Leg

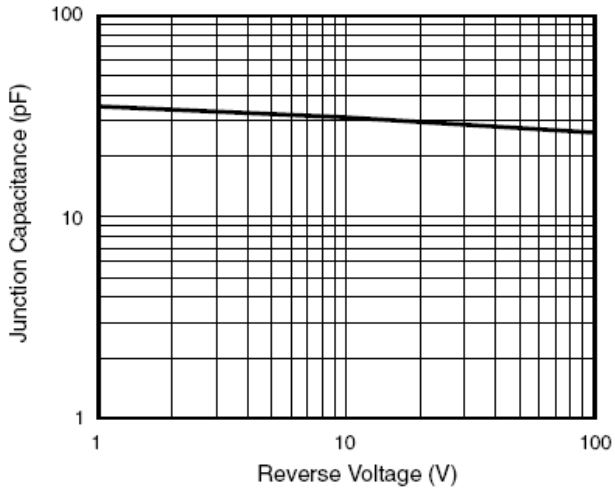


Figure 5. Typical Junction Capacitance Per Leg