

Pb Free Plating Product

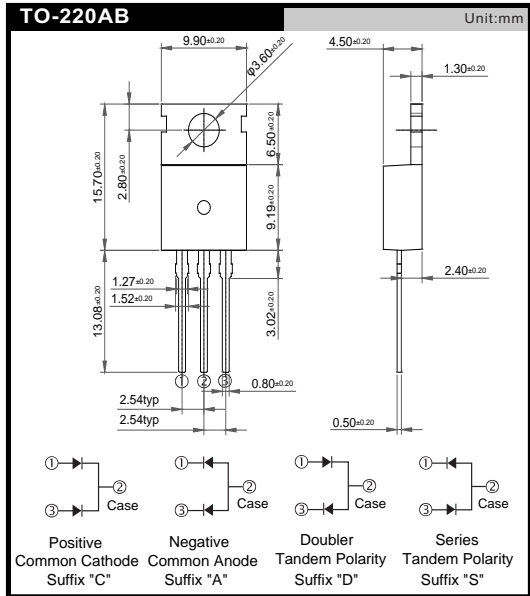
U12C20D/U12C40D/U12C60D



12 Ampere Heatsink Doubler 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, Motor Control and UPS
 - ★ Car Audio Amplifiers and Sound Device Systems

- Mechanical Data**
- ★ Case: Heatsink TO-220AB/TO-220CE
 - ★ 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: 2.2 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	U12C20D	U12C40D	U12C60D	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)	12.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	100			A
Maximum Instantaneous Forward Voltage @ 6.0 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	5.0 100			uA 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			°CW
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

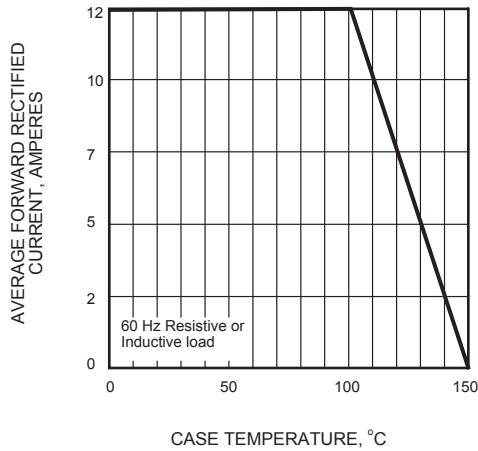


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

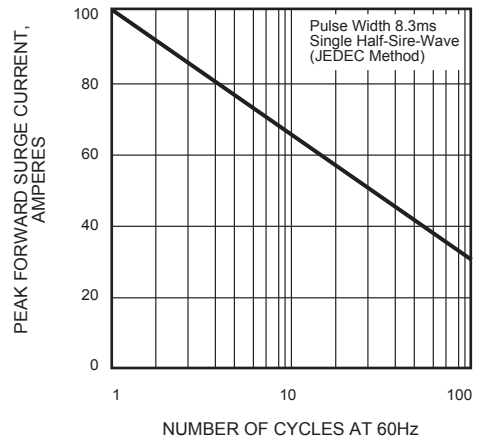


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

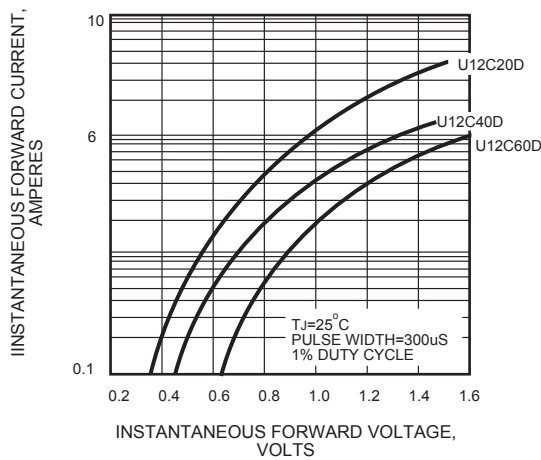


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

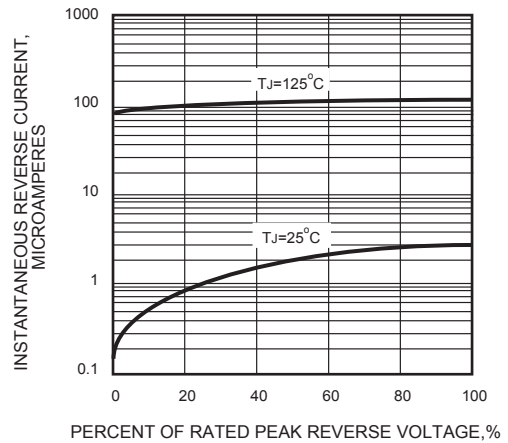


FIG.5 - TYPICAL JUNCTION CAPACITANCE

