

Pb Free Plating Product

U12C20C thru U12C60C



12 Ampere Common Cathode Ultra Fast Recovery Rectifiers

<p>Feature</p> <ul style="list-style-type: none"> ★ Fast switching for high efficiency ★ Low forward voltage drop ★ High current capability ★ Low reverse leakage current ★ High surge current capability <p>Application</p> <ul style="list-style-type: none"> ★ Automotive Environment and Inverters ★ Plating Power Supply, Adaptor, SMPS and UPS ★ Car Audio Amplifiers and Sound Device System 	<p>Mechanical Data</p> <ul style="list-style-type: none"> ★ Case: TO-220AB Heatsink ★ 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 	<p>TO-220AB</p> <p>Unit : inch (mm)</p> <p>① → ② → ③ → Case</p> <p>① → ② → ③ → Case</p> <p>① → ② → ③ → Case</p> <p>① → ② → ③ → Case</p> <p>Positive Common Cathode Suffix "C"</p> <p>Negative Common Anode Suffix "A"</p> <p>Doubler Tandem Polarity Suffix "D"</p> <p>Reverse Doubler Tandem Polarity Suffix "S"</p>
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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	U12C20C	U12C40C	U12C60C	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)}	12.0			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 @ 6.0 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

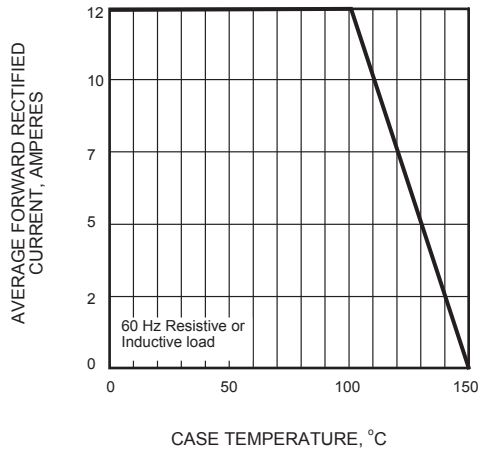


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

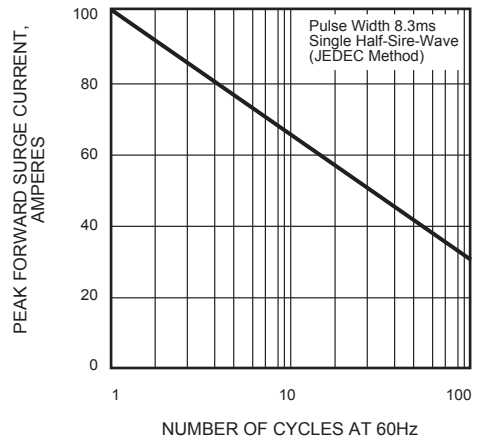


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

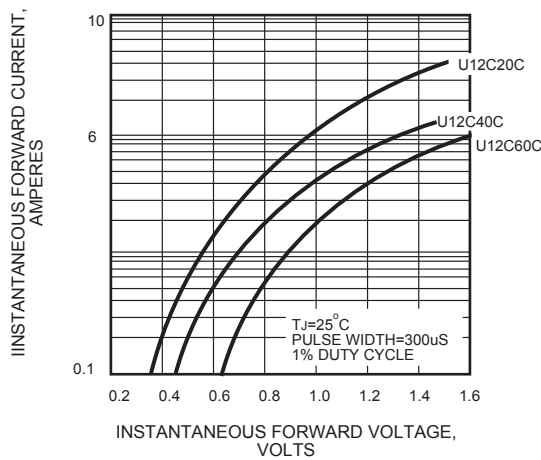


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

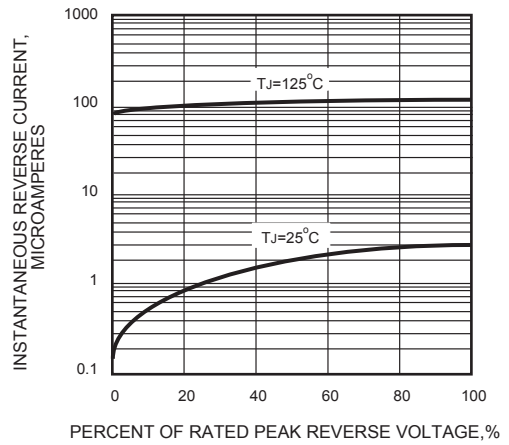


FIG.5 - TYPICAL JUNCTION CAPACITANCE

