

Pb Free Plating Product

F12C20C/F12C40C/F12C60C



12.0 Ampere Dual Common Cathode Ultra Fast Recovery Rectifiers

<p><b>Features</b></p> <ul style="list-style-type: none"> <li>※ Fast switching for high efficiency</li> <li>※ Low forward voltage drop</li> <li>※ High current capability</li> <li>※ Low reverse leakage current</li> <li>※ High surge current capability</li> </ul> <p><b>Application</b></p> <ul style="list-style-type: none"> <li>※ Automotive Inverters and Solar Inverters</li> <li>※ Car Audio Amplifiers and Sound Device Systems</li> <li>※ Plating Power Supply, Motor Control, UPS and SMPS etc.</li> </ul> <p><b>Mechanical Data</b></p> <ul style="list-style-type: none"> <li>※ Case: Heatsink TO-220AB</li> <li>※ Epoxy: UL 94V-0 rate flame retardant</li> <li>※ Terminals: Solderable per MIL-STD-202 method 208</li> <li>※ Polarity: As marked on diode body</li> <li>※ Mounting position: Any</li> <li>※ Weight: 2.0 gram approximately</li> </ul>	<p>TO-220AB(TO-220-3L) Unit:inch(mm)</p> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>Positive Common Cathode Suffix "C"</p> </div> <div style="text-align: center;"> <p>Negative Common Anode Suffix "A"</p> </div> <div style="text-align: center;"> <p>Doubler Tandem Polarity Suffix "D"</p> </div> <div style="text-align: center;"> <p>Series Tandem Polarity Suffix "S"</p> </div> </div>
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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%.

PARAMETER	SYMBOL	F12C20C F12C20A F12C20D F12C20S	F12C40C F12C40A F12C40D F12C40S	F12C60C F12C60A F12C60D F12C60S	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 (Total Device 2x6.0A=12.0A)	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 @6.0A (Per Diode/Per Leg)	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			µA µA
Maximum Reverse Recovery Time (Note1)	Trr	35			nS
Typical Junction Capacitance (Note 2)	CJ	65			pF
Typical Thermal Resistance (Note 3)	RθJC	1.5			°C/W
Operating Junction and Storage Temperature Range	TJ,TSTG	-55 to +150			°C

Note:(1)Reverse recovery test conditions IF = 0.5A, IR = 1.0A, Irr = 0.25A.

Note:(2)Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

Note:(3)Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

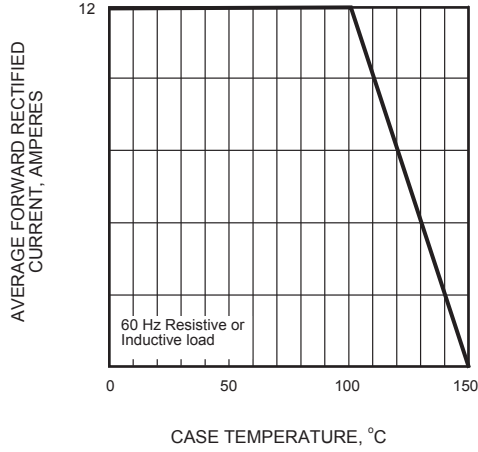


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

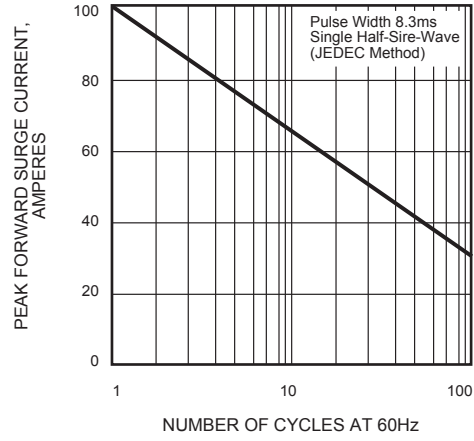


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

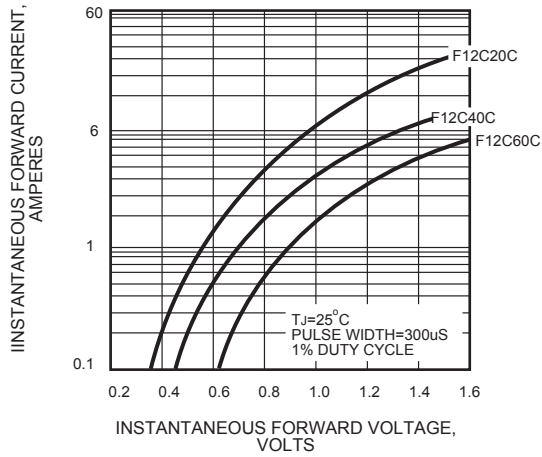


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

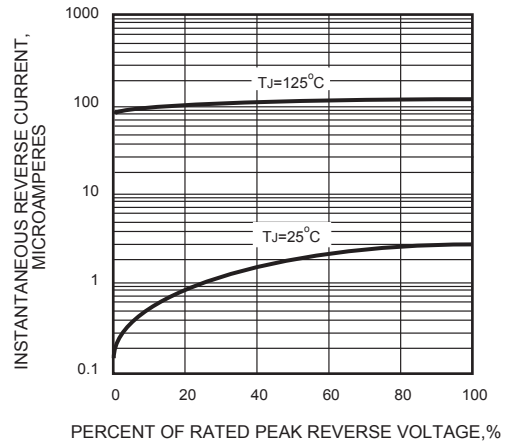


FIG.5 - TYPICAL JUNCTION CAPACITANCE

