



Pb Free Plating Product

2CR202 thru 2CR2012

20.0 Ampere Heatsink Dual Common Cathode Ultra Fast Recovery Rectifiers

Features	TO-220AB/TO-220-3L Unit:inch(mm)
※ ThinkSemi latest&matured process FRD/FRED ※ Low forward voltage drop ※ High current capability ※ Low reverse leakage current ※ High surge current capability	Internal Configuration ① → ② ③ → Case Positive Common Cathode
Application	
※ Automotive Inverters and Solar Inverters ※ Car Audio Amplifiers and Sound Device Systems ※ Plating Power Supply, Motor Control, UPS and SMPS etc.	
Mechanical Data	
※ Case: Heatsink open metal TO-220AB/TO-220-3L package ※ 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: 2.0 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%.

At capacitive load, reverse current by 20%.									
PARAMETER	SYMBOL	2CR202	2CR204	2CR206	2CR208	2CR2010	2CR2012	UNIT	
Maximum Recurrent Peak Reverse Voltage	VRRM	200	400	600	800	1000	1200	V	
Maximum RMS Voltage	VRMS	140	280	420	560	700	840	V	
Maximum DC Blocking Voltage	VDC	200	400	600	800	1000	1200	V	
Maximum Average Forward Rectified Current TC=125℃ (Total Device 2x10.0A=20.0A)	IF(AV)	20.0						A	
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg)	IFSM	200						A	
Maximum Instantaneous Forward Voltage @10.0A(Per Diode/Per Leg)	VF (Typical)	0.85-0.95	1.00-1.25	1.25-1.50	1.50-1.70			V	
Maximum DC Reverse Current @TJ=25℃ At Rated DC Blocking Voltage @TJ=125℃	IR	1.0 100							μA μA
Maximum Reverse Recovery Time (Note1)	Trr	15-25			25-35				nS
Typical Junction Capacitance (Note 2)	CJ	100							pF
Typical Thermal Resistance (Note 3)	RθJC	1.5							℃/W
Operating Junction and Storage Temperature Range	TJ,TSTG	-55 to +175						℃	

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

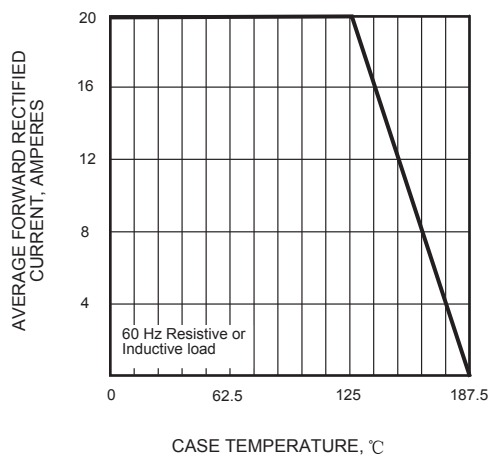


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

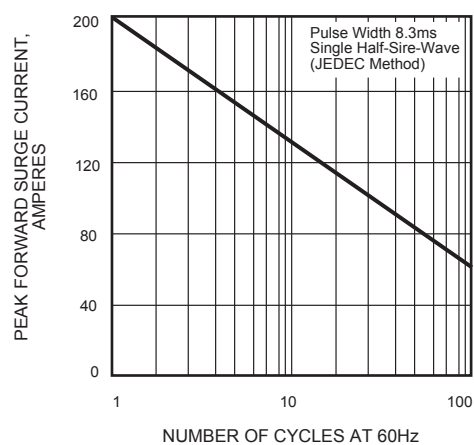


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

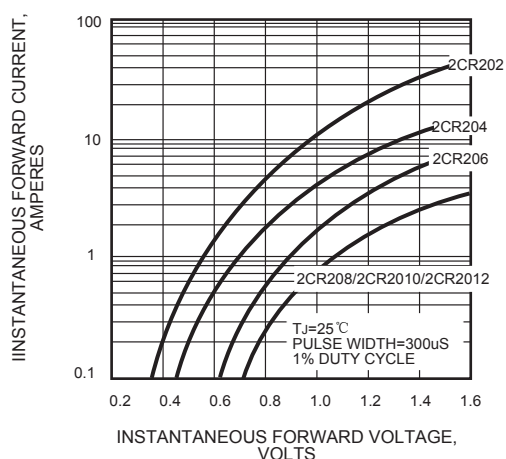


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

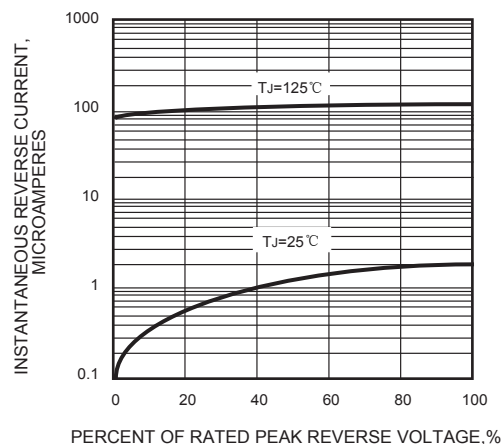


FIG.5 - TYPICAL JUNCTION CAPACITANCE

