

Pb Free Plating Product

MUR4020CR thru MUR40120CR



40.0 Ampere Heatsink Dual Doubler Polarity 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	
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%.

PARAMETER	SYMBOL	MUR4020CR	MUR4030CR MUR4040CR	MUR4060CR	MUR4080CR	MUR40100CR	MUR40120CR	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 2x20.0A=40.0A)	IF(AV)	40.0						A	
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg)	IFSM	400						A	
Maximum Instantaneous Forward Voltage @20.0A(Per Diode/Per Leg)	VF (Typical)	0.90-1.10	1.10-1.40	1.40-1.80	1.40-1.80			V	
Maximum DC Reverse Current @TJ=25℃ At Rated DC Blocking Voltage @TJ=125℃	IR	5.0 500			μA μA				
Maximum Reverse Recovery Time (Note1)	Trr	35-50			50-75				nS
Typical Junction Capacitance (Note 2)	CJ	200			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

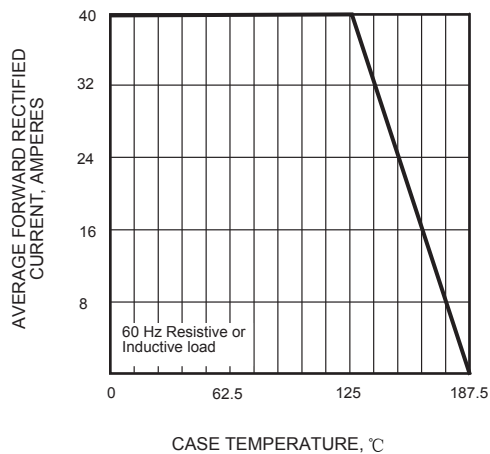


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

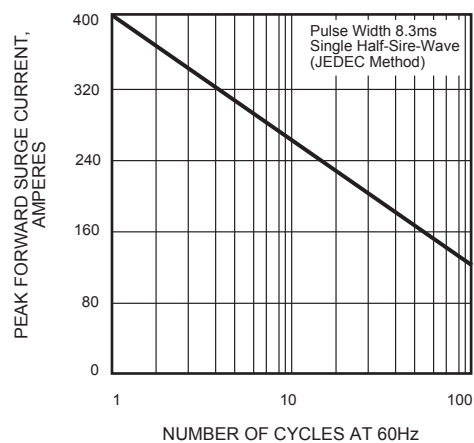


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

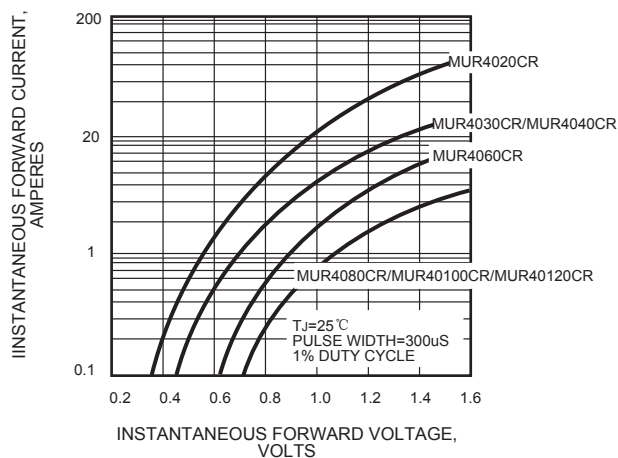


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

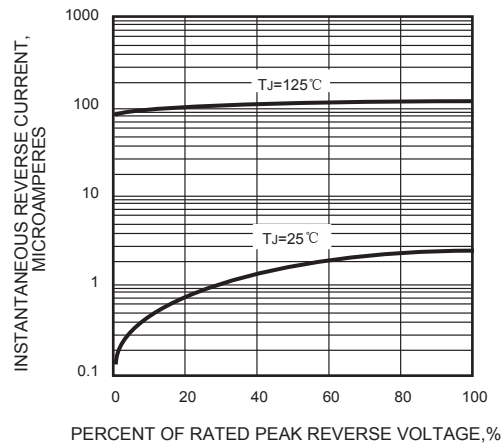


FIG.5 - TYPICAL JUNCTION CAPACITANCE

