Pb Free Plating Product

U2020R

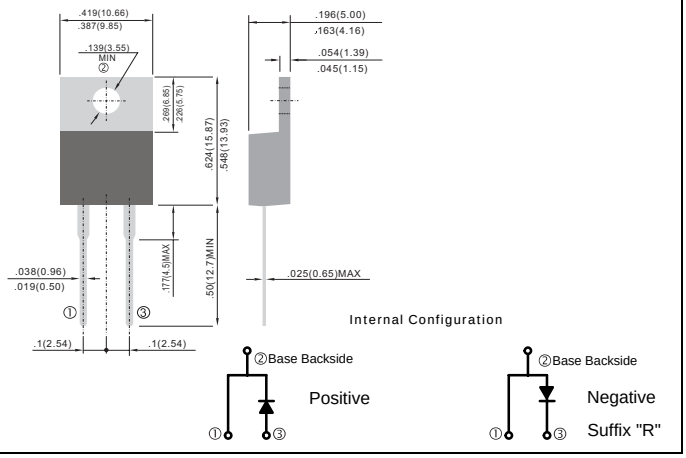
20.0 Ampere Heatsink Package Negative Ultra Fast Recovery Rectifier Diode

Features
※ ThinkiSemi 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: TO-220AC(TO-220-2L) with heat sink 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

TO-220AC(TO-220-2L) Unit:inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Rating at 25℃ ambient temperature unless otherwise specified.
Single phase,half wave,60Hz,resistive or inductive load.
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	U2020R	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	200	V
Maximum RMS Voltage	VRMS	140	V
Maximum DC Blocking Voltage	VDC	200	V
Maximum Average Forward Rectified Current TC=125℃ (Total Device 20A)	IF(AV)	20	A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg)	IFSM	300	A
Maximum Instantaneous Forward Voltage @20A(Per Diode/Per Leg)	VF (Typical)	0.90-1.00	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	25-50	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.

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FIG.1 - FORWARD CURRENT DERATING CURVE

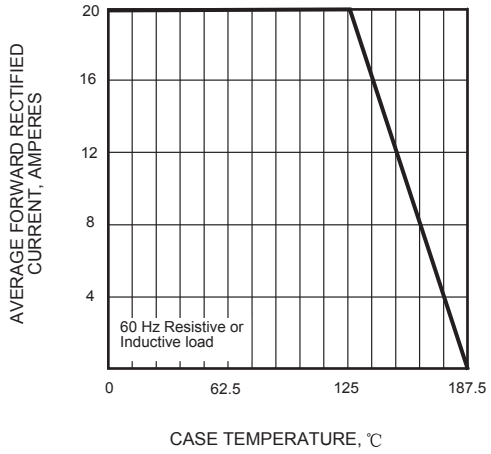


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

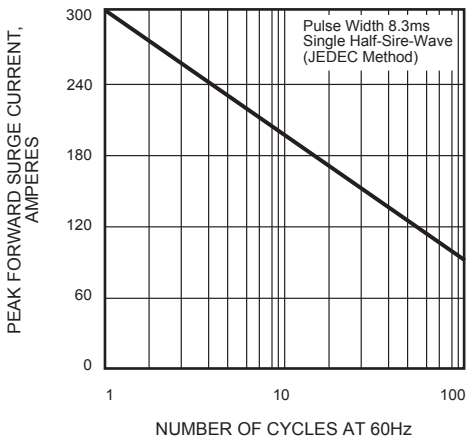


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

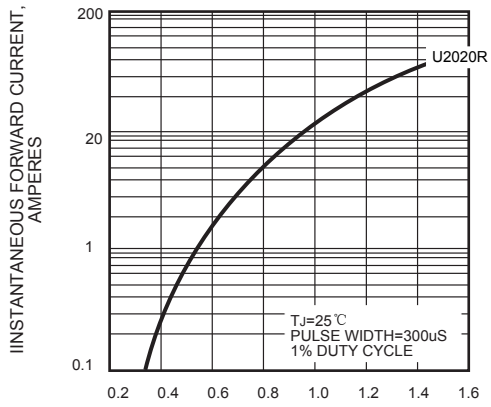


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

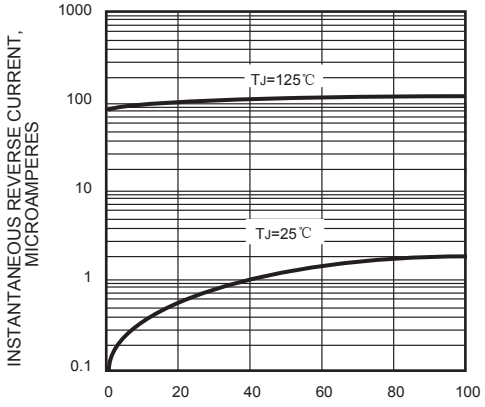
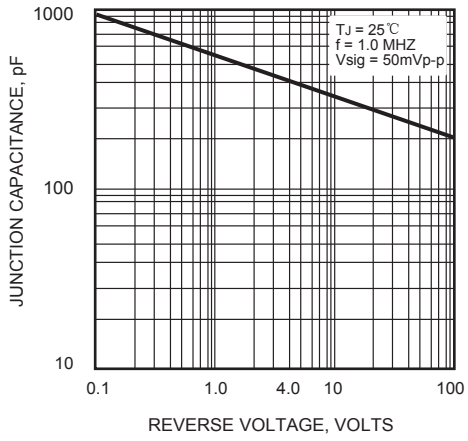


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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