

Pb Free Plating Product

TUR1520U thru TUR15120U



15.0 Ampere Heatsink Single Positive Type Ultra Fast Recovery Rectifier Diode

Features	TO-220AC(TO-220-2L) Unit:inch(mm)
※ ThinkSemi latest&matured process FRED/FRD ※ Low forward voltage drop ※ High current capability ※ Low reverse leakage current ※ High surge current capability	Internal Configuration ① ② Base Backside ③ Positive Type Suffix "U" Negative Type Suffix "UR"
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	

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	TUR1520U	TUR1540U	TUR1560U	TUR1580U	TUR15100U	TUR15120U	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°C (Total Device 15.0A)	IF(AV)	15.0						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 @15.0A(Per Diode)	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°C At Rated DC Blocking Voltage @TJ=125°C	IR	1.0 100				μA μA			
Maximum Reverse Recovery Time (Note1)	Trr	15-25			25-35				nS
Typical Junction Capacitance (Note 2)	CJ	150				pF			
Typical Thermal Resistance (Note 3)	RθJC	1.5						°C/W	
Operating Junction and Storage Temperature Range	TJ,TSTG	-55 to +175						°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

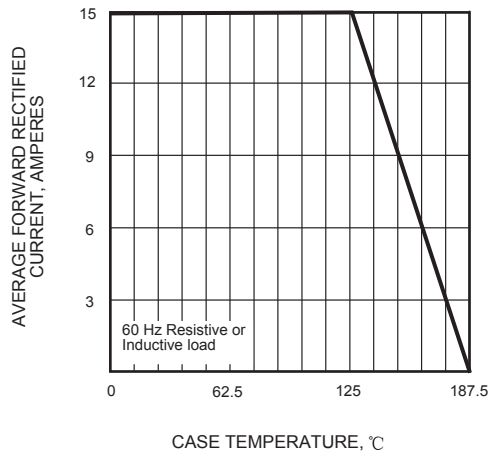


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

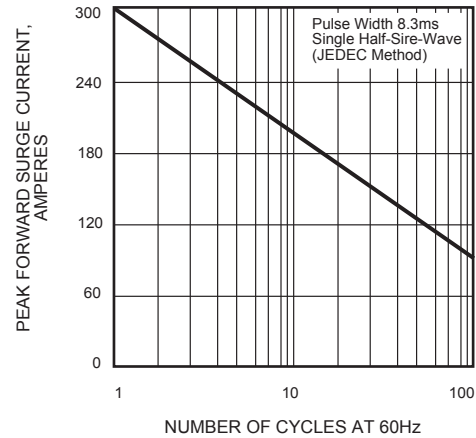


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

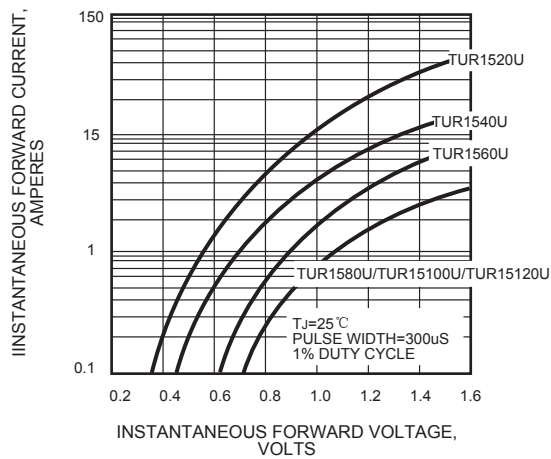


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

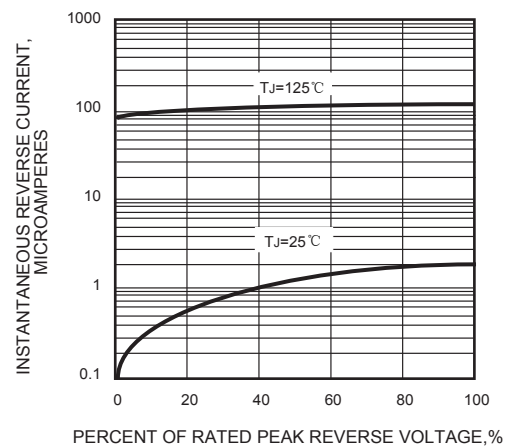


FIG.5 - TYPICAL JUNCTION CAPACITANCE

