

Pb Free Plating Product

TURF2020CTD thru TURF20120CTD



20.0 Ampere Insulated Dual Doubler Polarity Ultra Fast Recovery Rectifiers

Features	ITO-220AB/TO-220F-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: Isolated fully plastic ITO-220AB/TO-220F-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	TURF2020CTD	TURF2040CTD	TURF2060CTD	TURF2080CTD	TURF20100CTD	TURF20120CTD	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	25-50			50-75			nS	
Typical Junction Capacitance (Note 2)	CJ	100						pF	
Typical Thermal Resistance (Note 3)	RθJC	3.0						℃/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

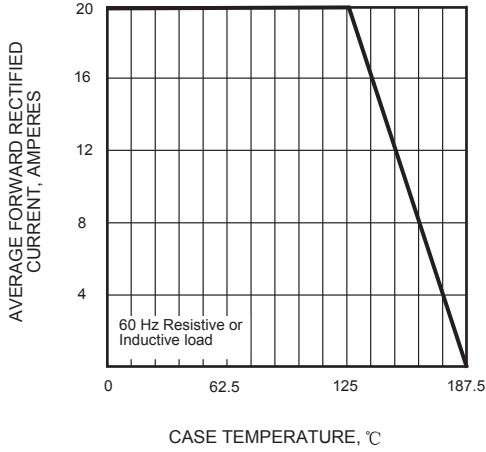


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

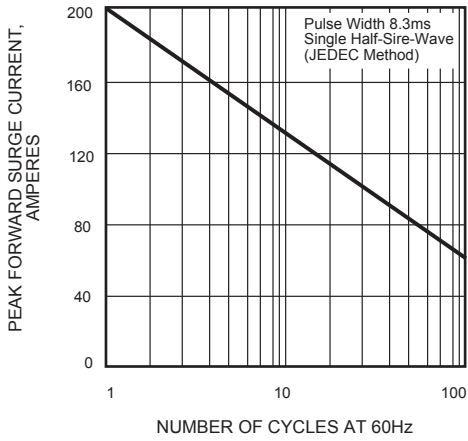


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

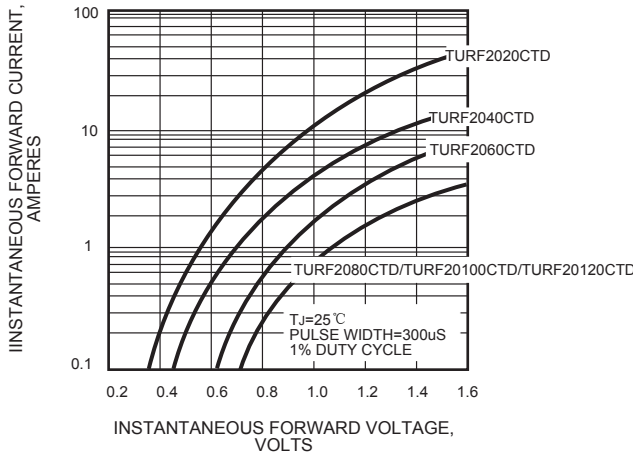


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

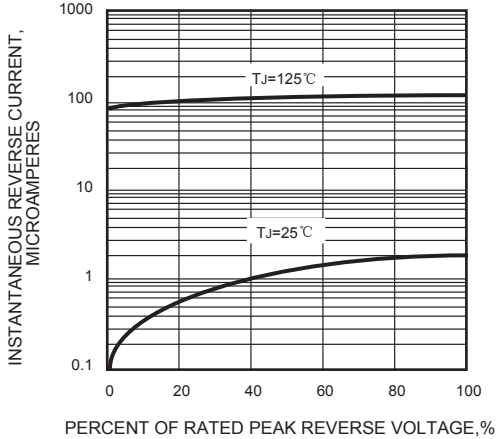


FIG.5 - TYPICAL JUNCTION CAPACITANCE

