



Pb Free Plating Product

TURF1020CTG thru TURF10120CTG

10.0 Ampere Insulated Dual Common Cathode Ultra Fast Recovery Rectifiers

<p>Features</p> <ul style="list-style-type: none"> ※ ThinkSemi latest&matured process FRD/FRED ※ Low forward voltage drop ※ High current capability ※ Low reverse leakage current ※ High surge current capability <p>Application</p> <ul style="list-style-type: none"> ※ Automotive Inverters and Solar Inverters ※ Car Audio Amplifiers and Sound Device Systems ※ Plating Power Supply, Motor Control, UPS and SMPS etc. <p>Mechanical Data</p> <ul style="list-style-type: none"> ※ 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 	<p>ITO-220AB/TO-220F-3L Unit: inch(mm)</p> <p>① → ② → Case ③ → Case</p> <p>① → ② → Case ③ → Case</p> <p>① → ② → Case ③ → Case</p> <p>① → ② → Case ③ → Case</p> <p>Positive Common Cathode Suffix *CTG*</p> <p>Negative Common Anode Suffix *CTA*</p> <p>Doubler Doubler Polarity Suffix *CTD*</p> <p>Series Series Connection Suffix *CTS*</p>
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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	TURF1020CTG	TURF1040CTG	TURF1060CTG	TURF1080CTG	TURF10100CTG	TURF10120CTG	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 2x5.0A=10.0A)	IF(AV)	10.0						A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg)	IFSM	125						A
Maximum Instantaneous Forward Voltage @5.0A(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°C At Rated DC Blocking Voltage @TJ=125°C	IR	1.0 100						µA µA
Maximum Reverse Recovery Time (Note1)	Trr	25-50			50-75			nS
Typical Junction Capacitance (Note 2)	CJ	65						pF
Typical Thermal Resistance (Note 3)	RθJC	3.0						°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

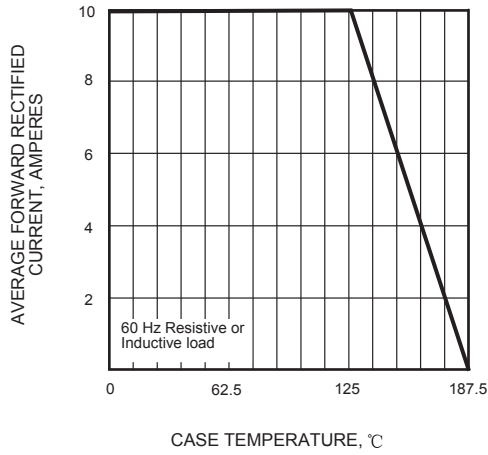


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

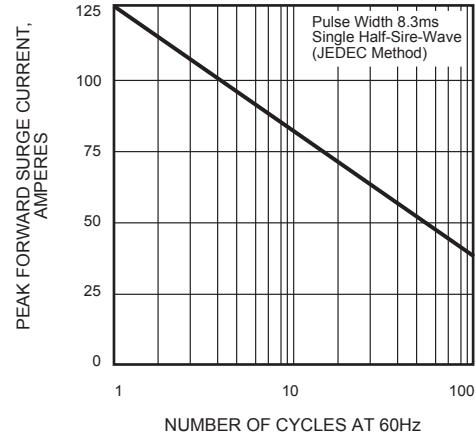


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

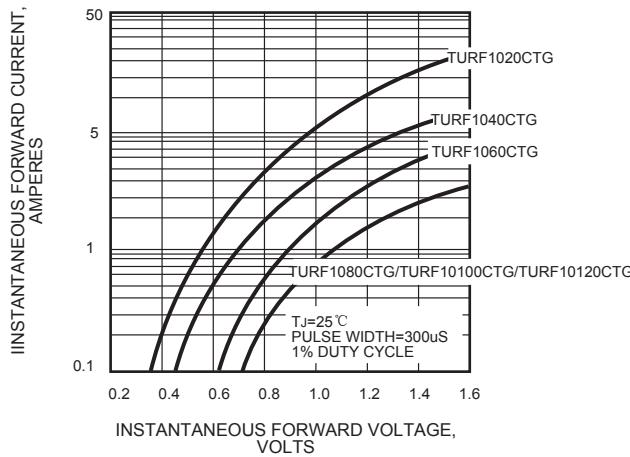


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

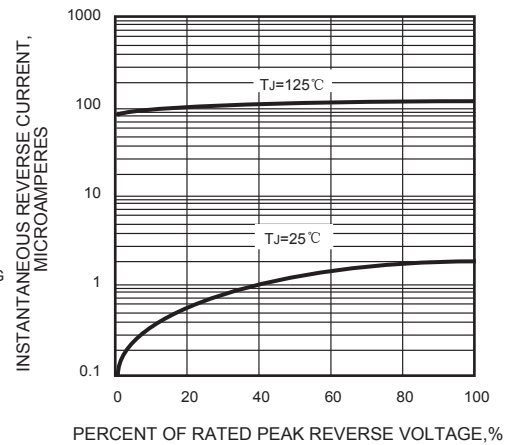


FIG.5 - TYPICAL JUNCTION CAPACITANCE

