

Pb Free Plating Product

TURB1020CTD thru TURB10120CTD



10.0 Ampere Surface Mount Dual Doubler Polarity Ultra Fast Recovery Rectifiers

<p>Features</p> <ul style="list-style-type: none"> ThinkiSemi 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: Surface Mount TO-263AB/D2PAK 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>TO-263AB/D2PAK</p> <p style="text-align: right;">Unit: inch(mm)</p> <p>① Positive Common Cathode Suffix *CTG*</p> <p>① Negative Common Anode Suffix *CTA*</p> <p>① Doubler Tandem Polarity Suffix *CTD*</p> <p>① Series Tandem Polarity 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	TURB1020CTD	TURB1040CTD	TURB1060CTD	TURB1080CTD	TURB10100CTD	TURB10120CTD	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	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

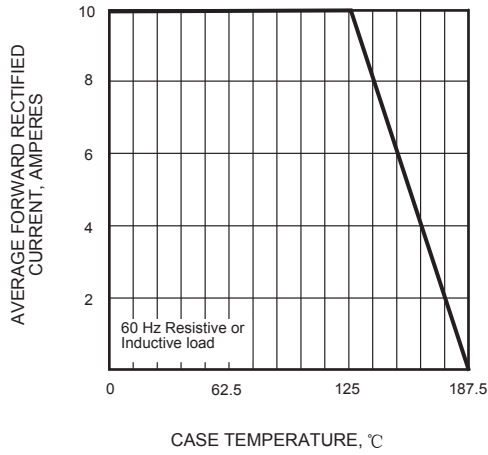


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

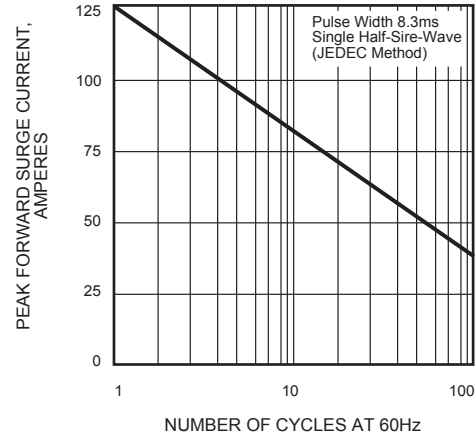


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

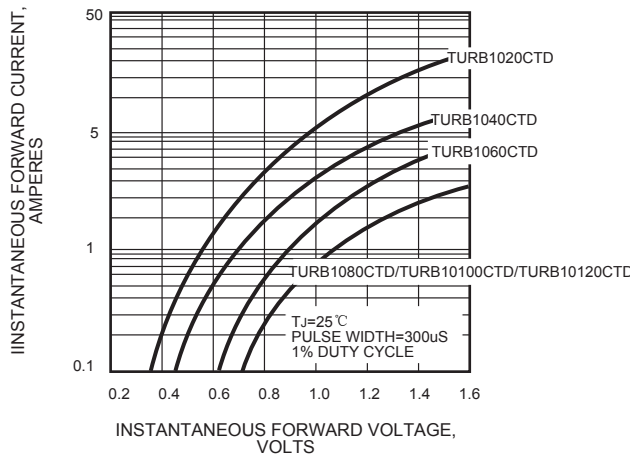


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

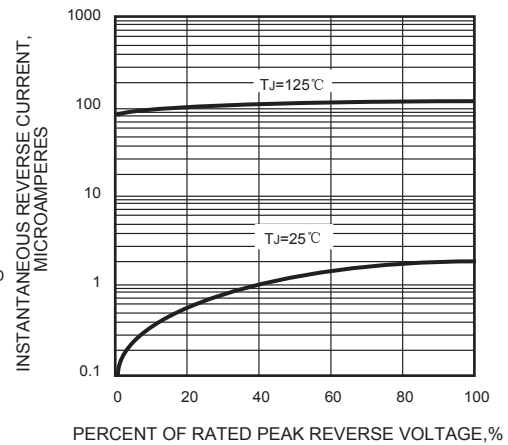


FIG.5 - TYPICAL JUNCTION CAPACITANCE

