

Pb Free Plating Product

TSF2020CTG/TSF2040CTG/TSF2060CTG



20.0 Ampere Heatsink Common Cathode Super Fast Recovery Rectifiers

Features

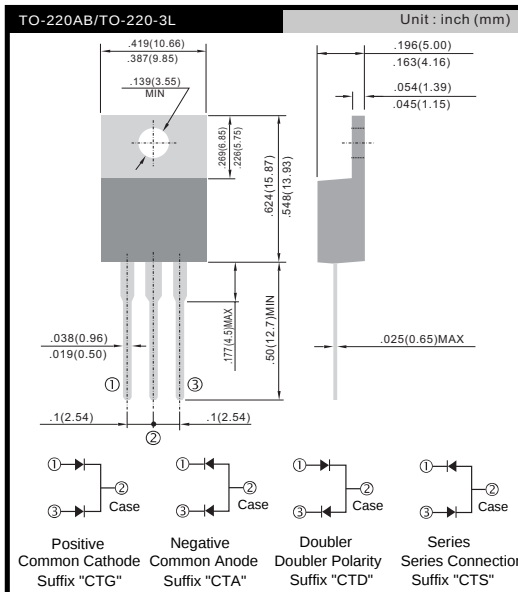
- ★ ThinkiSemi mature FRD process
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ★ Case: Heatsink TO-220AB open metal 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: 2.2 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%.

	SYMBOL	TSF2020CTG	TSF2040CTG	TSF2060CTG	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	200	400	600	V
Maximum RMS Voltage	VRMS	140	280	420	V
Maximum DC Blocking Voltage	VDC	200	400	600	V
Maximum Average Forward Rectified Current Tc=125℃ (Total Device 2x10A=20A)	IF(AV)	20.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	200			A
Maximum Instantaneous Forward Voltage @ 10.0 A (Per Diode/Per Leg)	VF	0.98	1.3	1.7	V
Maximum DC Reverse Current @TJ=25℃ At Rated DC Blocking Voltage @TJ=125℃	IR	5.0 100			μA μA
Maximum Reverse Recovery Time (Note 1)	Trr	35			nS
Typical junction Capacitance (Note 2)	CJ	120	70		pF
Typical Thermal Resistance (Note 3)	RθJC	2.0			℃/W
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to + 150			℃

NOTES : (1) Reverse recovery test conditions I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

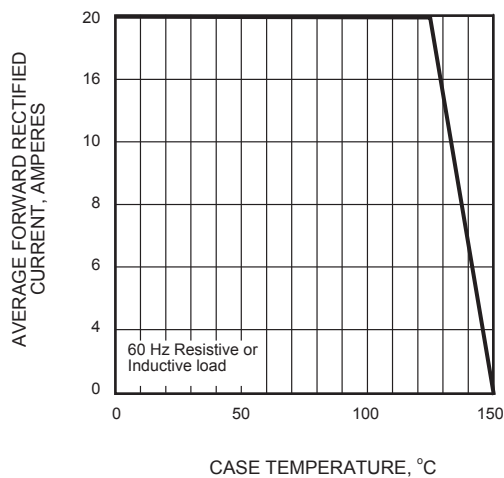


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

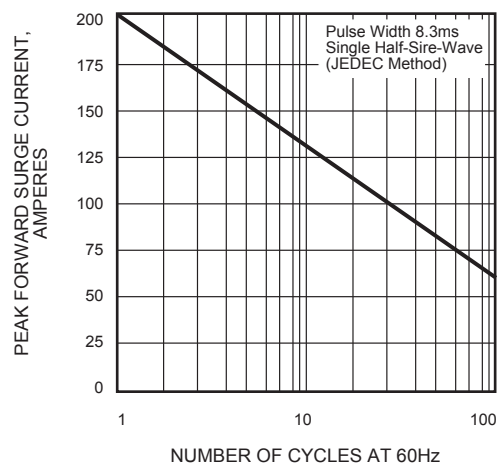


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

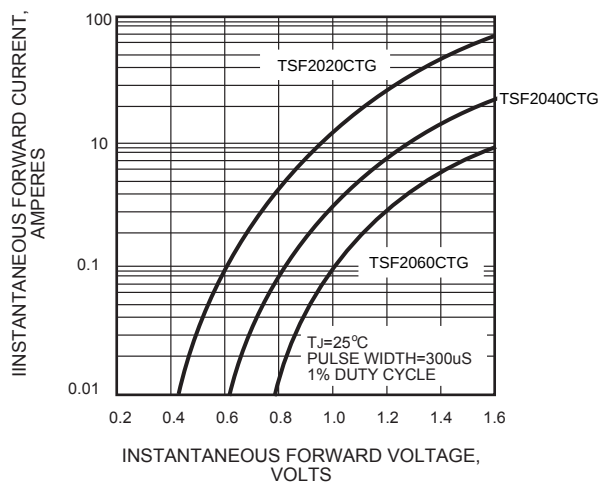


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

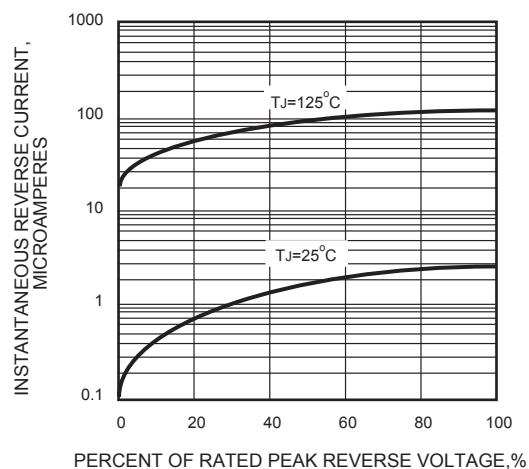


FIG.5 - TYPICAL JUNCTION CAPACITANCE

