

Pb Free Plating Product

8S2TH02I/8S2TH04I/8S2TH06I



16.0 Ampere Ceramic Insulated Dual Series Connection Ultra Fast Recovery Rectifiers

Features

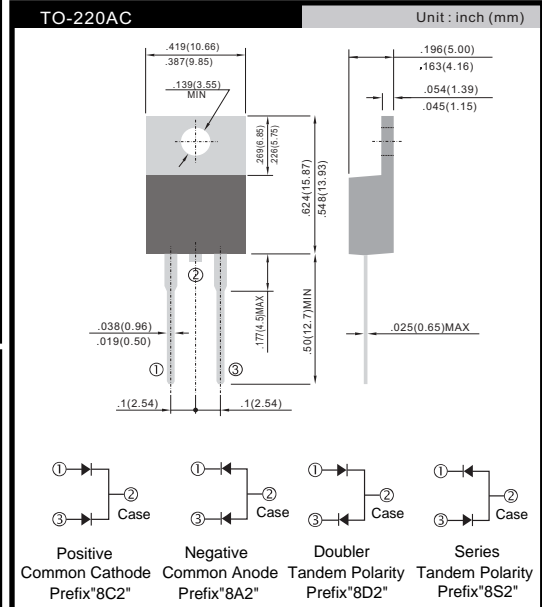
- * Latest FRED technology with super fast recovery time
- * Low forward voltage drop
- * High current capability
- * Low reverse leakage current
- * High surge current capability

Application

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

Mechanical Data

- * Case: TO-220AC heatsink with inner ceramic insulated
- * 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%.

	SYMBOL	8S2TH02I	8S2TH04I	8S2TH06I	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	V
Maximum RMS Voltage	V _{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	200	400	600	V
Maximum Average Forward Rectified Current T _c =100°C (Total Device)	I _{F(AV)}	16.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	175	150		A
Maximum Instantaneous Forward Voltage @ 8.0 A (Per Diode)	V _F	0.98	1.3	1.7	V
Maximum DC Reverse Current @ T _J =25°C At Rated DC Blocking Voltage @ T _J =125°C	I _R		5.0 100		uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}		25-35		nS
Typical junction Capacitance (Note 2)	C _J		90		pF
Typical Thermal Resistance (Note 3)	R _{θJC}		1.5		°C/W
Operating Junction and Storage Temperature Range	T _J , T _{STG}		-55 to + 150		°C

NOTES : (1) Reverse recovery test conditions I_F = 0.5A, 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

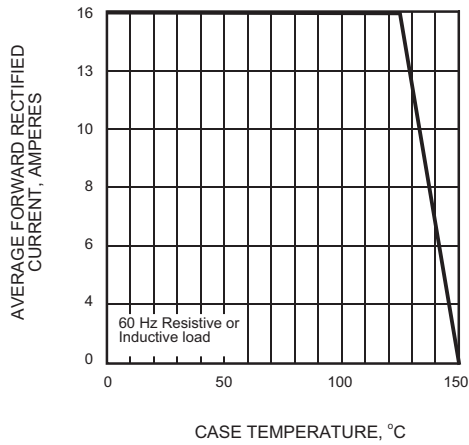


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

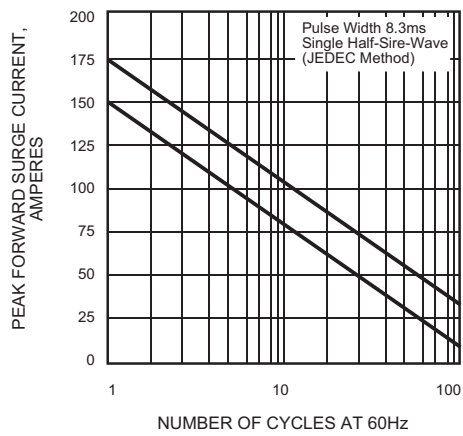


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

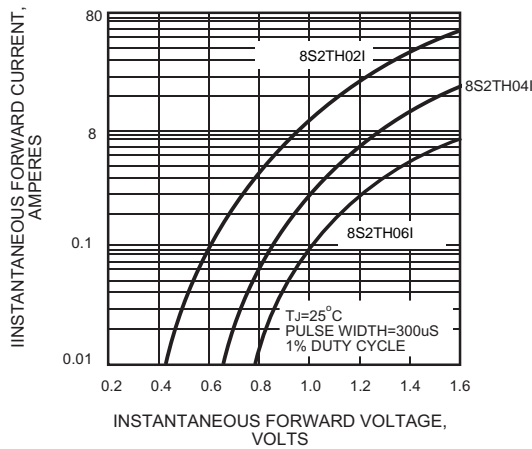


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

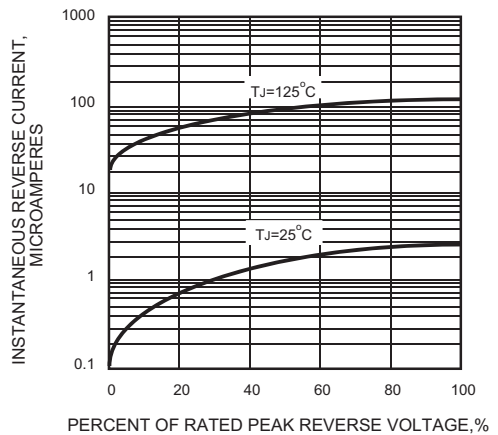


FIG.5 - TYPICAL JUNCTION CAPACITANCE

