

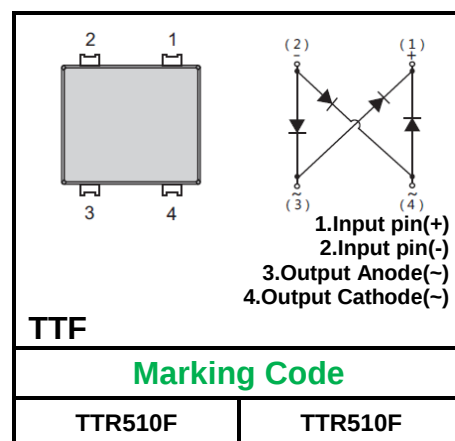
5A SURFACE MOUNT GLASS PASSIVATED BRIDGE

RECTIFIER Reverse Voltage - 100 to 1000 V

Forward Current – 5.0A

FEATURES

- ◆High current capability
- ◆Low forward voltage drop
- ◆Glass Passivated Chip Junction
- ◆Designed for Surface Mount Application
- ◆Lead free in comply with EU RoHS 2011/65/EU directives



MECHANICAL DATA

- ◆Case: TTF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.461g /0.0163oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	TTR510F	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Average Rectified Output Current at $T_c=100^{\circ}C$	I_o	5.0	A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load(JEDEC method)	I_{FSM}	180	A
I ² t Rating for Fusing	I^2t	134.46	A ² S
Typical Thermal Resistance (Note1)	$R_{\theta JA}$	60	$^{\circ}C/W$
	$R_{\theta JC}$	10	
	$R_{\theta JL}$	12	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}C$

(1) Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	Test Conditions	Typ	Max	Units
Instantaneous forward voltage	V_F	$I_F=5A, T_J=25^{\circ}C$	-	1.0	V
Reverse current at DC blocking voltage	I_R	$T_J=25^{\circ}C$ $T_J=125^{\circ}C$	-	1 200	μA
Maximum Reverse Recovery Time	T_{rr}	Measured with $I_F=0.5A, I_R=1A,$ $I_{rr}=0.25 A.$	-	500	nS
Typical Junction Capacitance	C_j	$f=1MHz, V_R=4V$ DC $T_J=25^{\circ}C$	60	-	pF

Fig.1 Average Rectified Output Current Derating Curve

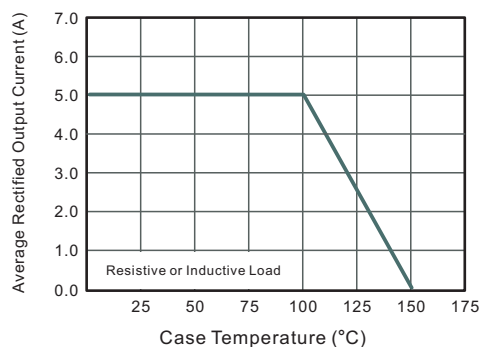


Fig.2 Typical Reverse Characteristics

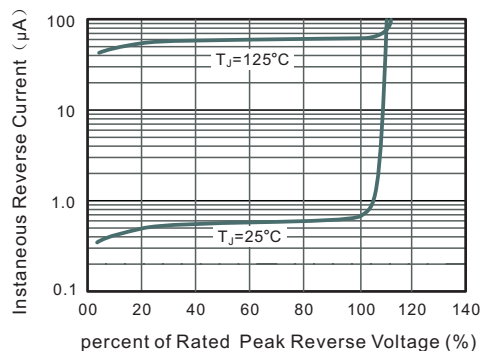


Fig.3 Typical Instantaneous Forward Characteristics

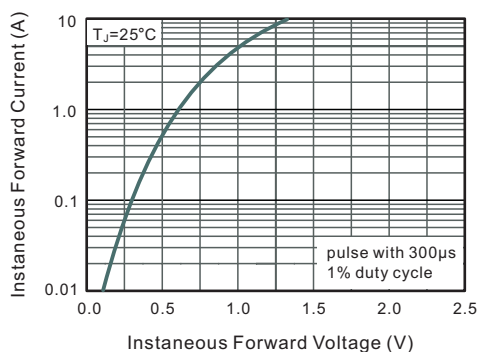


Fig.4 Typical Junction Capacitance

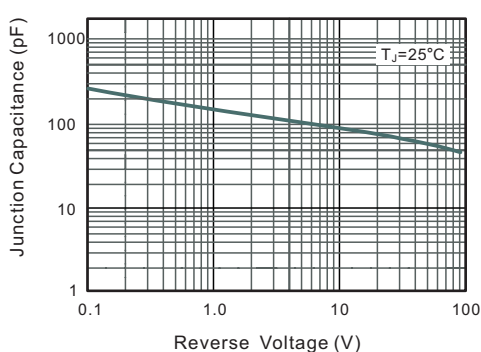


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

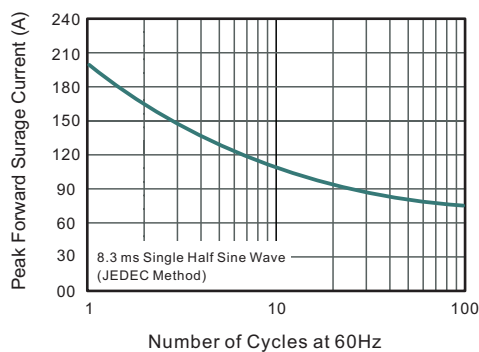
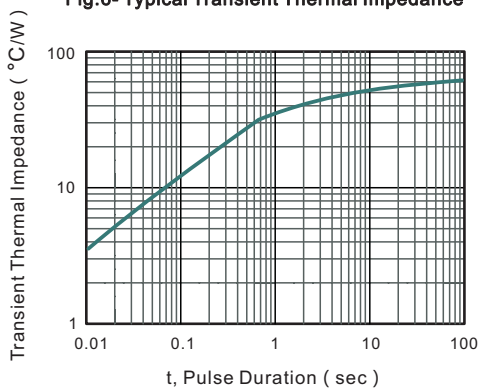


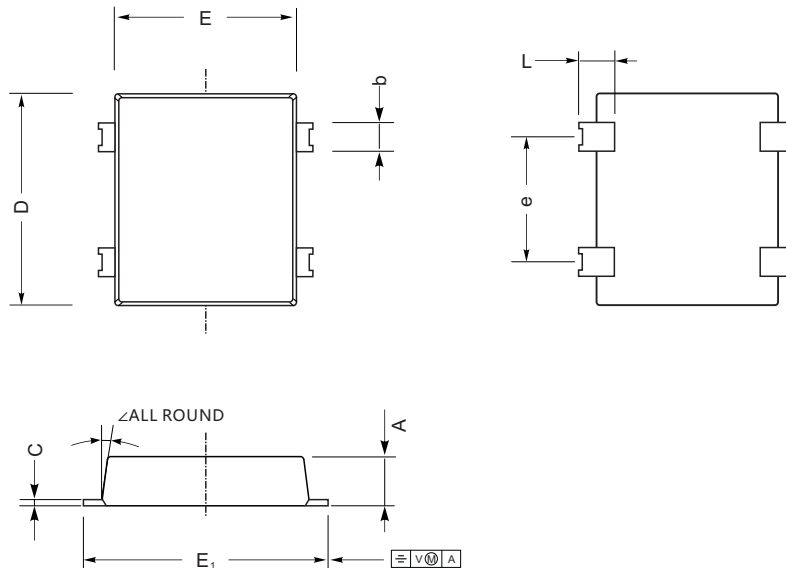
Fig.6- Typical Transient Thermal Impedance



Package Outline

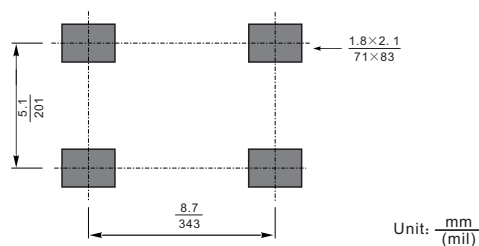
TTF

Plastic surface mounted package; 4 leads



UNIT		A	C	D	E	E ₁	L	e	b	∠
mm	max	1.75	0.55	9.8	8.8	10.2	1.25	5.3	1.55	10°
	min	1.35	0.25	9.4	8.4	9.8	0.85	4.9	1.25	
mil	max	68	21.6	385	346	401	49	209	61	
	min	53	9.8	370	330	385	33	193	49	

The recommended mounting pad size



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
TTF	Tape/Reel, 13" reel	3000	EIA-481-1