

Features

- High Frequency Operation
- High Surge Forward Current Capability
- Halogen Free. "Green" Device (Note 1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Planar Structure Die and Soft Recovery Characteristics

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +175°C
- Storage Temperature Range: -65°C to +175°C
- Maximum thermal Resistance:3.0°C/W Junction to Lead
- Maximum thermal Resistance:85°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
TES6DH	TES6DH	200V	140V	200V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6A	$T_L = 155^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, Half Sine
Forward Voltage Drop Per Element	V_F	0.94V(Max.) 0.87V(Typ.) 0.80V(Max.) 0.70V(Typ.)	$I_F=6A ; T_J = 25^\circ\text{C}$ $I_F=6A ; T_J = 25^\circ\text{C}$ $I_F=6A ; T_J = 125^\circ\text{C}$ $I_F=6A ; T_J = 125^\circ\text{C}$
DC Reverse Current At Rated DC Blocking Voltage	I_R	2 μA (Max.) 2.5 μA (Typ.) 15 μA (Max.)	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Typical Junction Capacitance	C_J	140pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

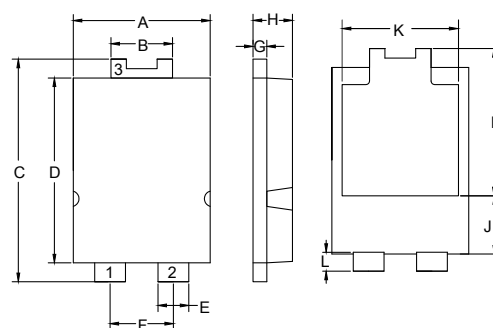
Reverse Recovery Time	t_{rr}	18ns(Typ.) 25ns(Max.)	$I_F=0.5\text{A}; I_R=1.0\text{A};$ $I_{RR}=0.25\text{A}$	$I_F = 6\text{ A}$ $di_F/dt = 200\text{ A}/\mu\text{s}$ $V_R = 200\text{ V}$
		29ns(Typ.) 34ns(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	
Peak recovery current	I_{RRM}	3.3A(Typ.) 5.9A(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	
Reverse recovery charge	Q_{rr}	49nC(Typ.) 105nC(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

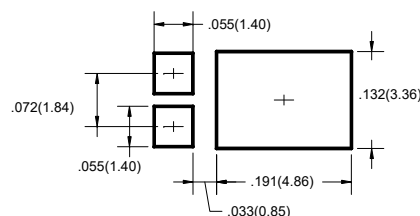
6 Amp FRED Rectifiers 200 Volts

TO-277



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.154	0.161	3.90	4.10	
B	0.067	0.075	1.70	1.90	
C	0.252	0.260	6.40	6.60	
D	0.209	0.217	5.30	5.50	
E	0.031	0.039	0.80	1.00	
F	0.071	0.075	1.80	1.90	
G	0.014	0.018	0.35	0.45	
H	0.043	0.047	1.10	1.20	
I	0.161	0.177	4.10	4.50	
J	0.059	0.075	1.50	1.90	
K	0.114	0.134	2.90	3.40	
L	0.022	0.030	0.55	0.75	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Forward Current Derating Curve

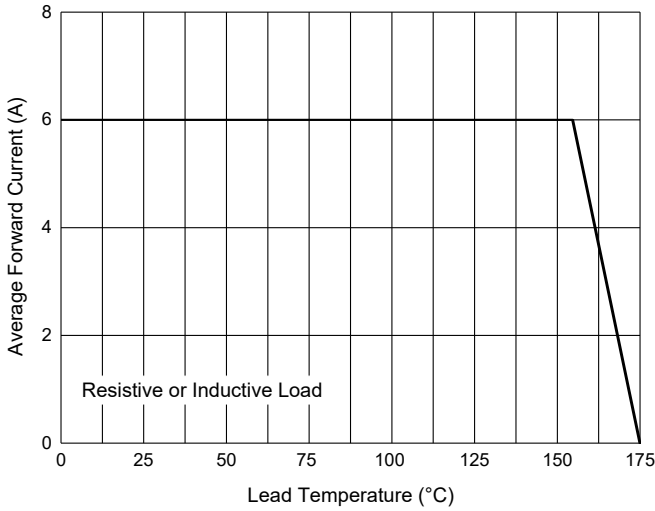


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

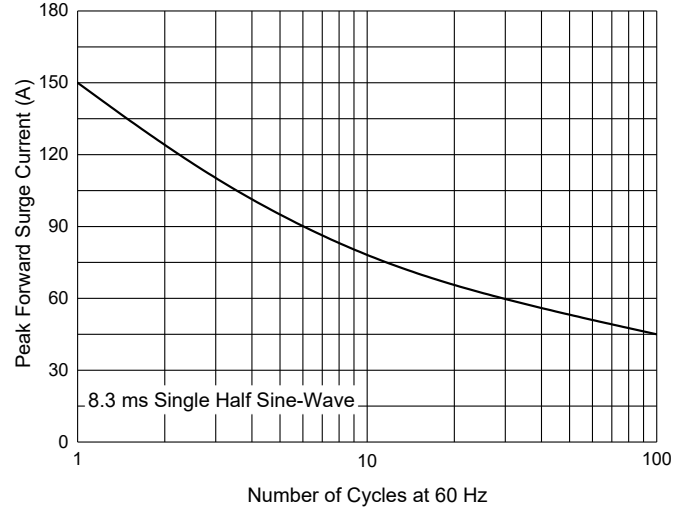


Fig. 3 - Typical Instantaneous Forward Characteristics

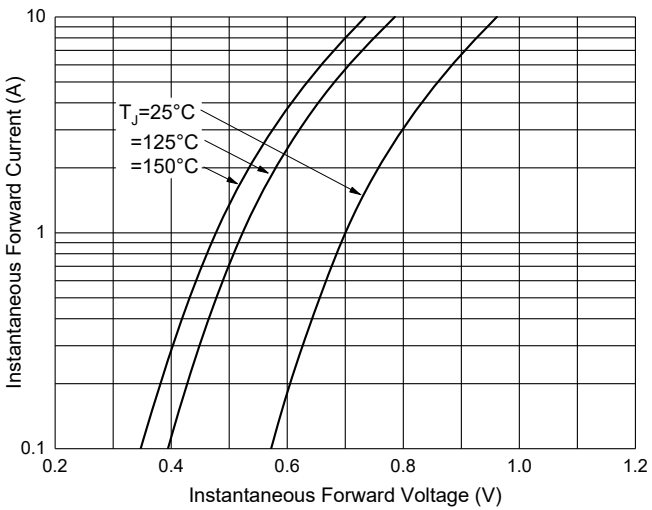


Fig. 4 - Typical Reverse Leakage Characteristics

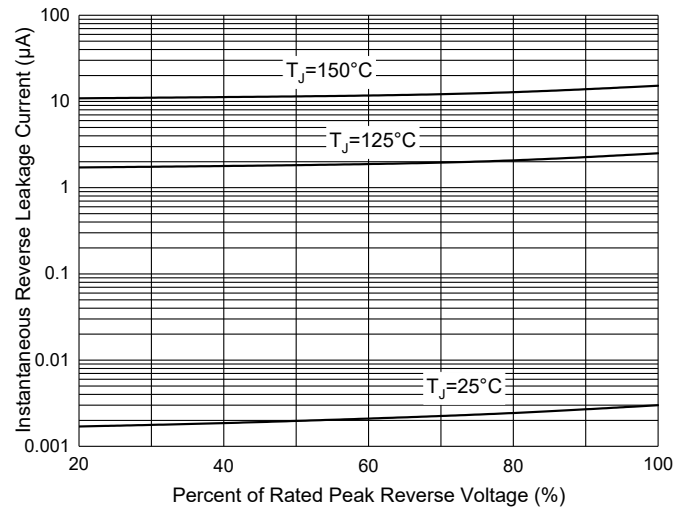


Fig. 5 - Capacitance Characteristics

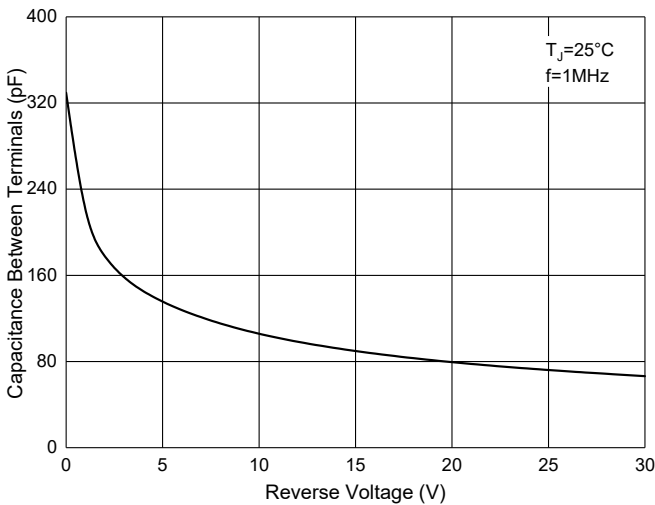
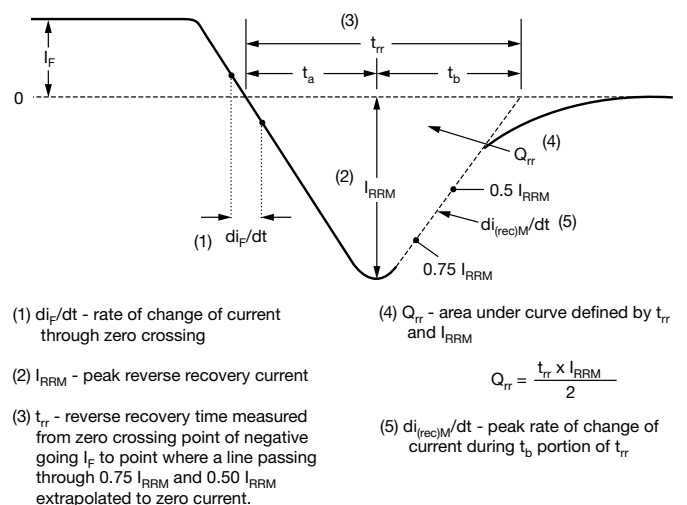


Fig. 6 - Reverse Recovery Waveform and Definitions



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 4Kpcs/Reel

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