

Features

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Low Switching Losses and High Efficiency
- Low Reverse Leakage
- Reverse Recovery Time < 25ns

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 5°C/W Junction to Case

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MURSD860B	MURSD860B	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Rectified Forward Current	$I_{F(AV)}$	8.0A	$T_C = 25^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	70A	8.3ms, Half Sine
Instantaneous Forward Voltage	V_F	2.70V(Typ) 3.6V(Max) 1.8V(Typ)	$I_F=8\text{A}; T_J=25^\circ\text{C}$ $I_F=8\text{A}; T_J=25^\circ\text{C}$ $I_F=8\text{A}; T_J=150^\circ\text{C}$
Reverse Current At Rated DC Blocking Voltage	I_R	10 μA 100 μA	$T_J=25^\circ\text{C};$ $T_J=150^\circ\text{C}$
Typical Junction Capacitance	C_J	40pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

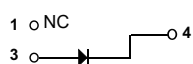
Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Reverse Recovery Time	t_{rr}	14ns(Typ.) 25ns(Max.)	$I_F=0.5\text{A}; I_R=1.0\text{A};$ $I_{RR}=0.25\text{A}$	$I_F = 8\text{ A}$ $di_F/dt = 200\text{ A}/\mu\text{s}$ $V_R = 400\text{ V}$
		40ns(Typ.) 50ns(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	
Peak recovery current	I_{RRM}	1.7A(Typ.) 4.5A(Typ.)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	
Reverse recovery charge	Q_{rr}	35nC(Typ.) 115nC(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.

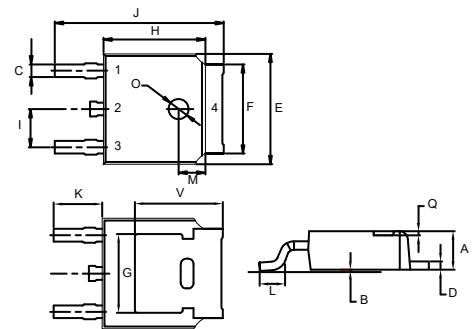
2. High temperature solder exemption applied, see EU directive annex 7a.

Internal Structure



8 Amp FRED Rectifiers 600 Volts

DPAK(TO-252)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

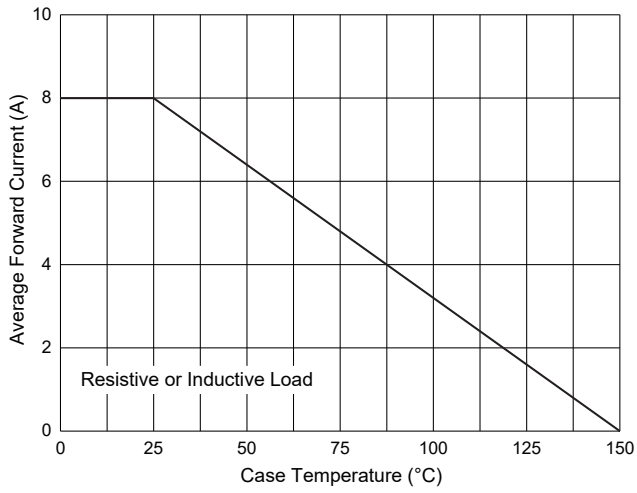


Fig. 3 - Maximum Non-Repetitive Peak Forward Surge Current

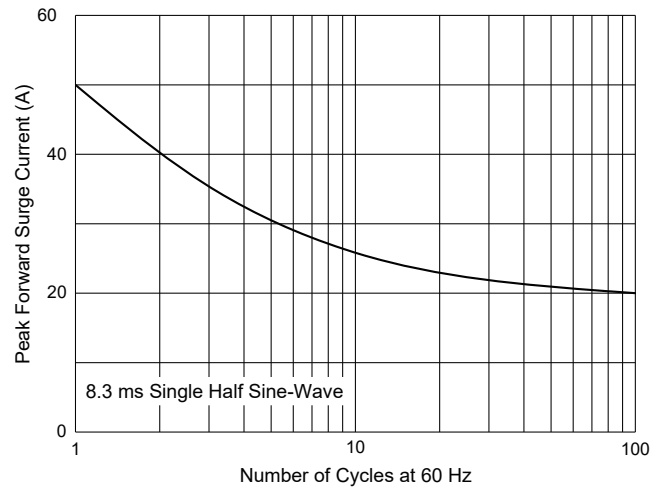


Fig. 3 - Typical Instantaneous Forward Characteristics

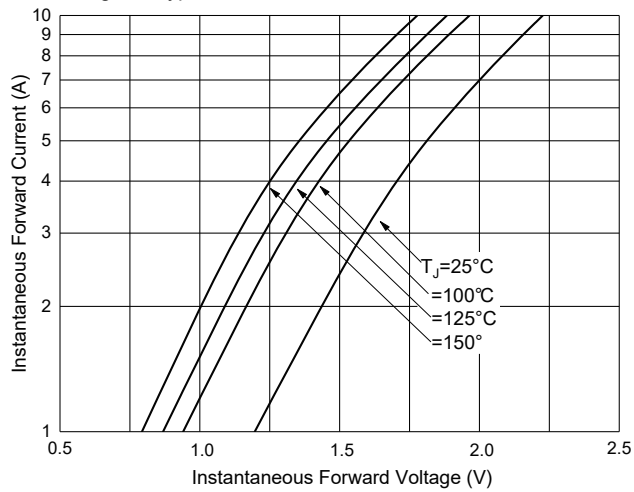
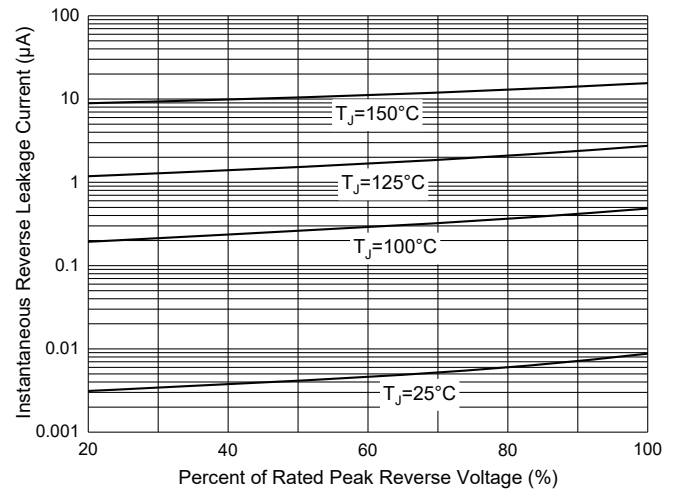


Fig. 4 - Typical Reverse Leakage Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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