MURHD560T4

Preferred Device

MEGAHERTZ™ Power Rectifier

Features and Benefits

- Ultrafast 30 Nanosecond Recovery Times
- 175°C Operating Junction Temperature
- High Temperature Glass Passivated Junction
- High Voltage Capability to 600 Volts
- These are Pb−Free Devices

Applications

- Power Supplies
- Inverters
- Free Wheeling Diodes

Mechanical Characteristics

- Case: Epoxy, Molded
- Epoxy Meets UL 94 V−0 @ 0.125 in
- Weight: 0.4 g (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- ESD Ratings: Machine Model = C (>400 V)
  Human Body Model = 3B (>8000 V)

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	V
Average Rectified Forward Current (Rated V_R, T_C = 159°C)	$I_{F(AV)}$	5.0	A
Non−Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	50	A
Operating Junction and Storage Temperature Range	T_J, T_{stg}	−65 to +175	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

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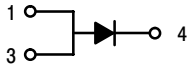
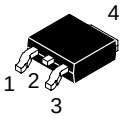
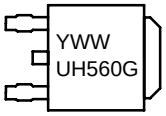
ULTRAFAST RECTIFIER
5.0 AMPERES
600 VOLTS





DPAK
CASE 369C

MARKING DIAGRAM



UH560G = Device Code
Y = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping†
MURHD560T4G	DPAK (Pb−Free)	2500 /Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

Preferred devices are recommended choices for future use and best overall value.

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.5	°C/W
Maximum Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	49.5	°C/W

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (Note 2) (I_F = 5.0 Amps, T_C = 25°C) (I_F = 5.0 Amps, T_C = 125°C)	V_F	 2.7 1.65	V
Maximum Instantaneous Reverse Current (Note 2) (Rated dc Voltage, T_C = 25°C) (Rated dc Voltage, T_C = 125°C)	I_R	 10 70	μA
Maximum Reverse Recovery Time (I_F = 1.0 Amp, di/dt = 50 Amps/μs, V_R = 30 V, T_J = 25°C)	t_{rr}	30	ns

1. Rating applies when surface mounted on a 1.5 mm FR4 PC board with a 1 oz. thick, 700 mm^2 Cu area.
2. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

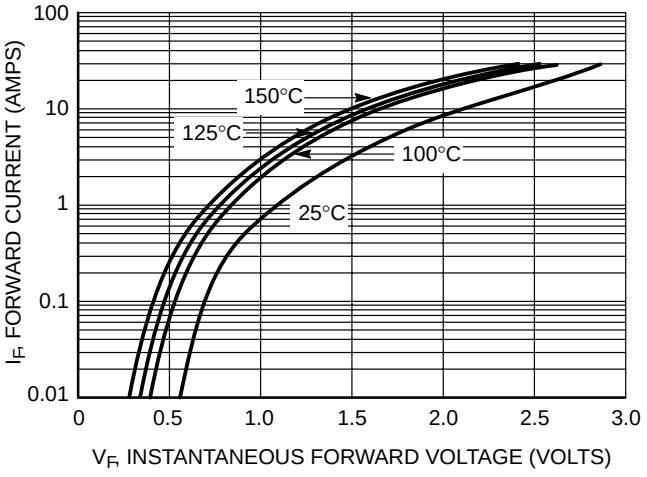


Figure 1. Typical Forward Voltage

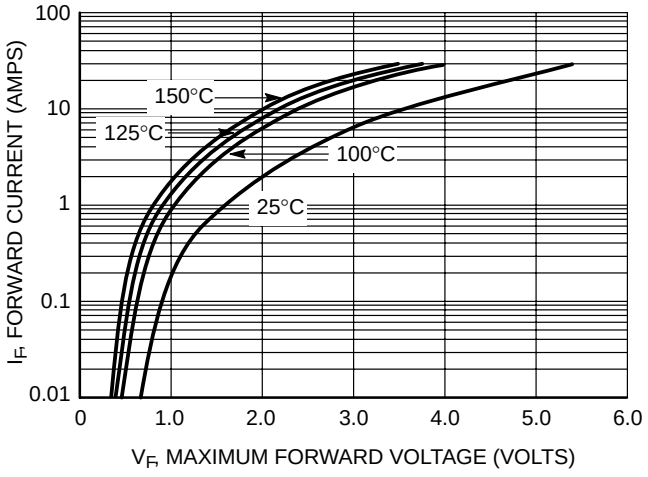


Figure 2. Maximum Forward Voltage

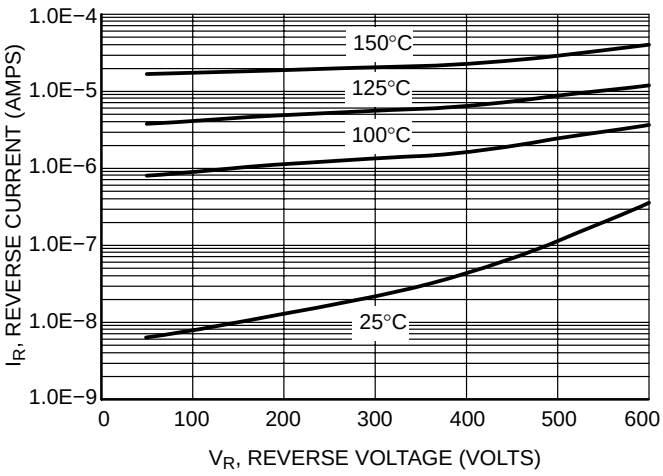


Figure 3. Typical Reverse Current

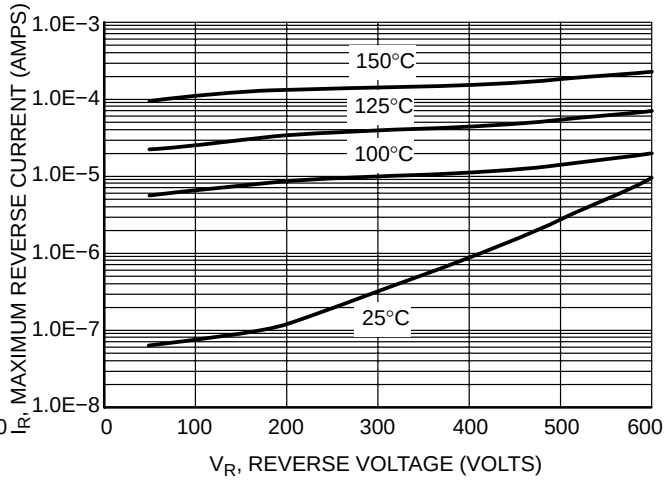


Figure 4. Maximum Reverse Current

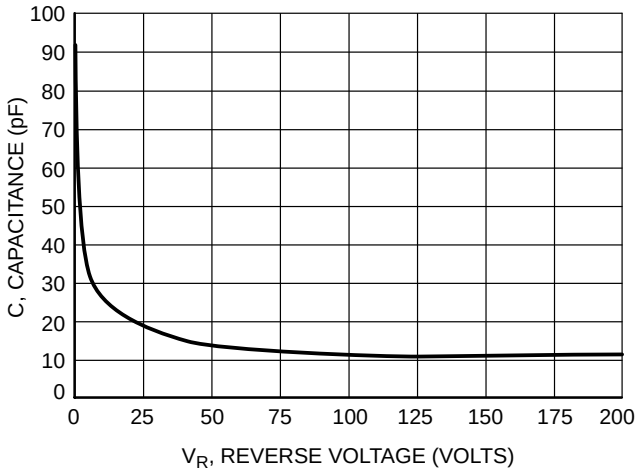


Figure 5. Typical Capacitance

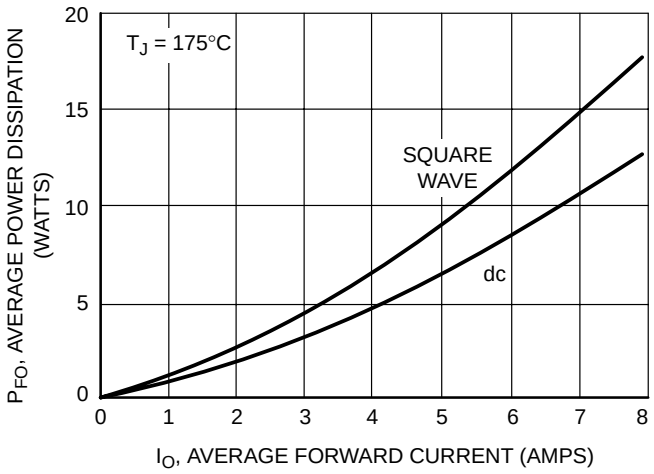


Figure 6. Forward Power Dissipation

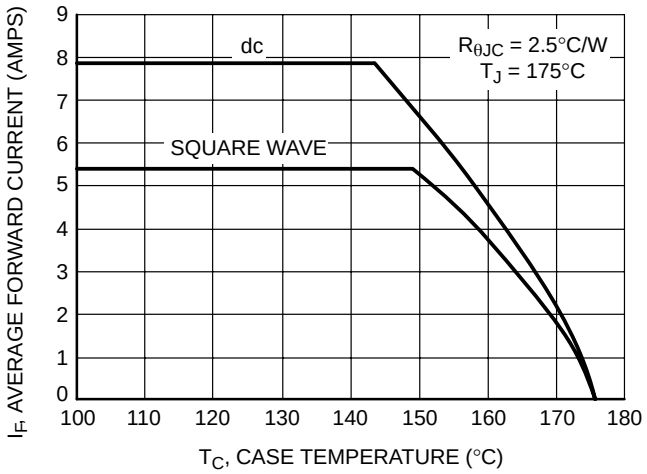


Figure 7. Current Derating

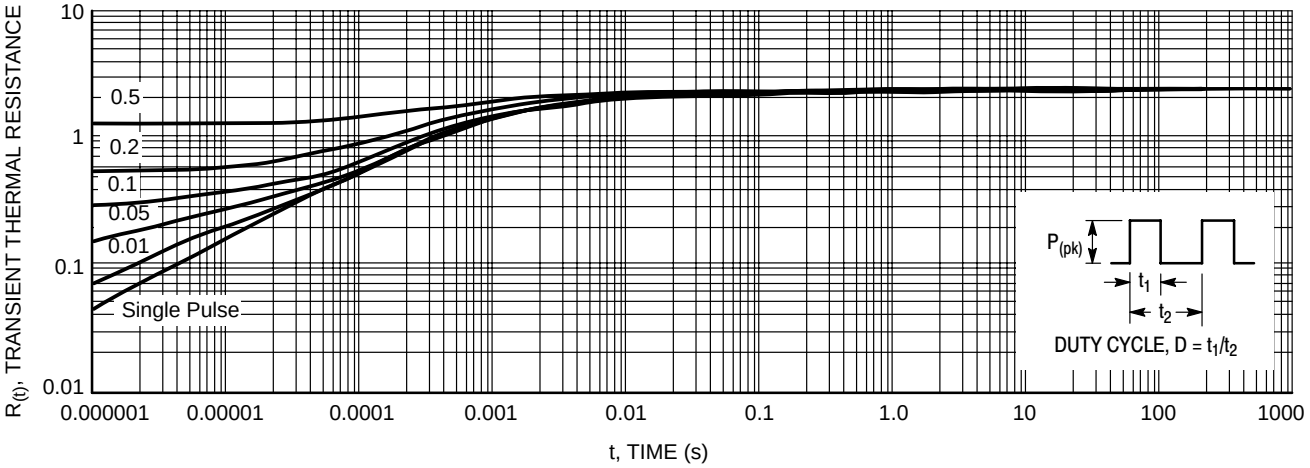


Figure 8. Thermal Response, Junction to Case

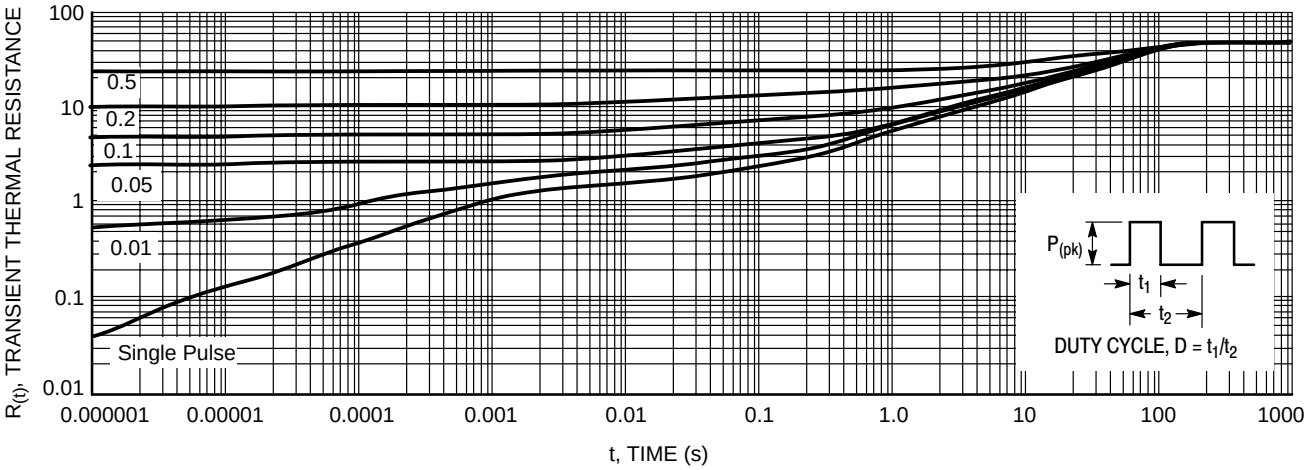
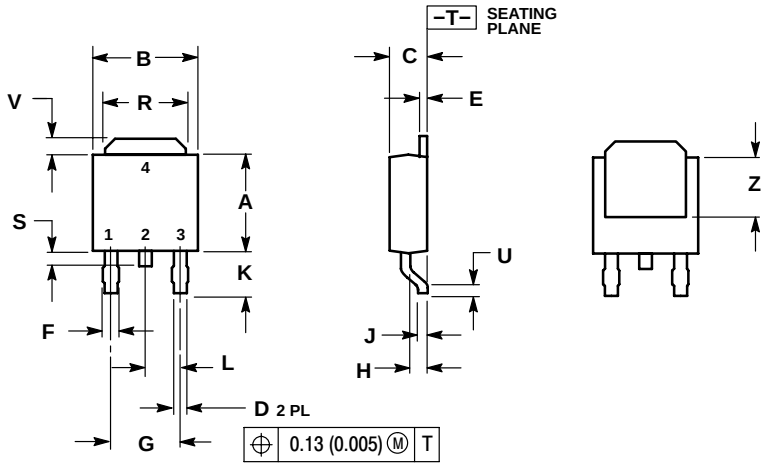


Figure 9. Thermal Response, Junction to Ambient

MURHD560T4

PACKAGE DIMENSIONS

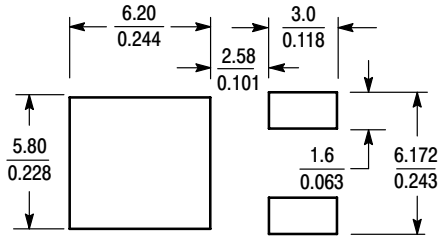
DPAK
CASE 369C−01
ISSUE O



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.235	0.245	5.97	6.22
B	0.250	0.265	6.35	6.73
C	0.086	0.094	2.19	2.38
D	0.027	0.035	0.69	0.88
E	0.018	0.023	0.46	0.58
F	0.037	0.045	0.94	1.14
G	0.180 BSC		4.58 BSC	
H	0.034	0.040	0.87	1.01
J	0.018	0.023	0.46	0.58
K	0.102	0.114	2.60	2.89
L	0.090 BSC		2.29 BSC	
R	0.180	0.215	4.57	5.45
S	0.025	0.040	0.63	1.01
U	0.020	−−−	0.51	−−−
V	0.035	0.050	0.89	1.27
Z	0.155	−−−	3.93	−−−

RECOMMENDED FOOTPRINT



SCALE 3:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

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