MURD620CT

Preferred Device

SWITCHMODE™ Power Rectifier

DPAK Surface Mount Package

. . . designed for use in switching power supplies, inverters and as free wheeling diodes, these state-of-the-art devices have the following features:

- Ultrafast 35 Nanosecond Recovery Time
- Low Forward Voltage Drop
- Low Leakage

Mechanical Characteristics:

- Case: Epoxy, Molded
- Weight: 0.4 gram (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped 75 units per plastic tube
- Available in 16 mm Tape and Reel, 2500 units per reel, by adding a "T4'' suffix to the part number
- Marking: U620T

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
Average Rectified Forward Current (Rated V_R, T_C = 140°C) Per Diode Per Device	$I_{F(AV)}$	3.0 6.0	A
Peak Repetitive Forward Current (Rated V_R, Square Wave, 20 kHz, T_C = 145°C) Per Diode	I_F	6.0	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, 60 Hz)	I_{FSM}	50	A
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-65 to +175	°C

ON Semiconductor®

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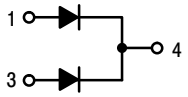
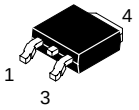
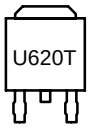
ULTRAFAST RECTIFIER 6.0 AMPERES 200 VOLTS





DPAK
CASE 369A
PLASTIC

MARKING DIAGRAM



U620T = Device Code

ORDERING INFORMATION

Device	Package	Shipping
MURD620CT	DPAK	75 Units/Rail
MURD620CTT4	DPAK	2500/Tape & Reel

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

THERMAL CHARACTERISTICS (Per Diode)

Rating	Symbol	Value	Unit
Thermal Resistance, Junction to Case Junction to Ambient (Note 1)	$R_{\theta JC}$ $R_{\theta JA}$	9 80	°C/W

ELECTRICAL CHARACTERISTICS (Per Diode)

Maximum Instantaneous Forward Voltage Drop (Note 2) (i_F = 3 Amps, T_C = 25°C) (i_F = 3 Amps, T_C = 125°C) (i_F = 6 Amps, T_C = 25°C) (i_F = 6 Amps, T_C = 125°C)	v_F	 1 0.96 1.2 1.13	Volts
Maximum Instantaneous Reverse Current (Note 2) (T_J = 25°C, Rated dc Voltage) (T_J = 125°C, Rated dc Voltage)	i_R	 5 250	μA
Maximum Reverse Recovery Time (I_F = 1 Amp, di/dt = 50 Amps/μs, V_R = 30 V, T_J = 25°C) (I_F = 0.5 Amp, i_R = 1 Amp, I_{REC} = 0.25 A, V_R = 30 V, T_J = 25°C)	t_{rr}	 35 25	ns

1. Rating applies when surface mounted on the minimum pad sizes recommended.
2. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

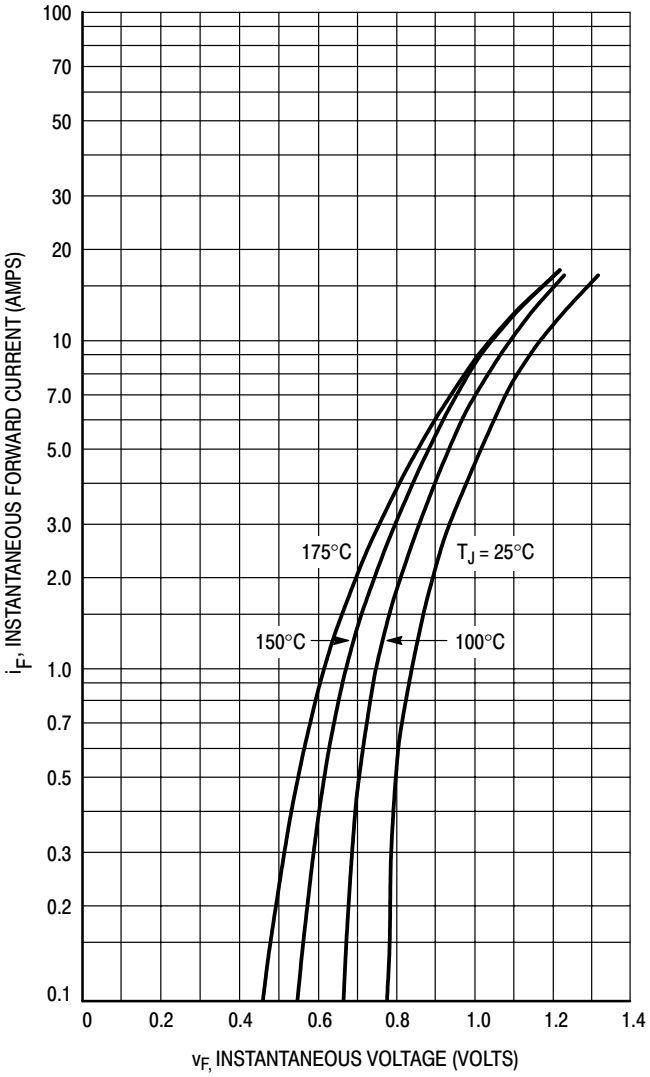


Figure 1. Typical Forward Voltage (Per Leg)

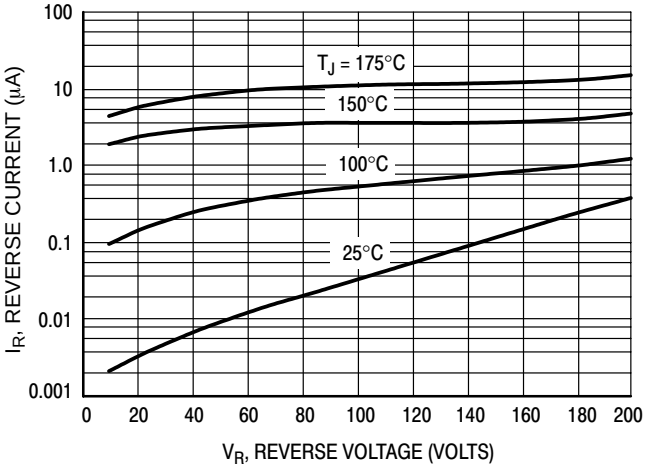


Figure 2. Typical Leakage Current* (Per Leg)

* The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these curves if V_R is sufficiently below rated V_R.

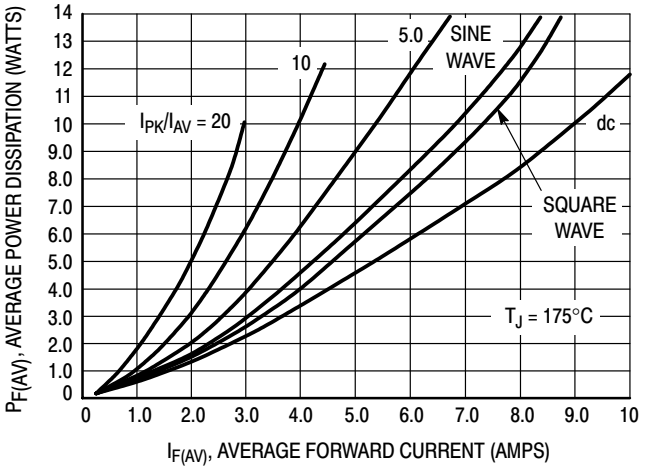


Figure 3. Average Power Dissipation (Per Leg)

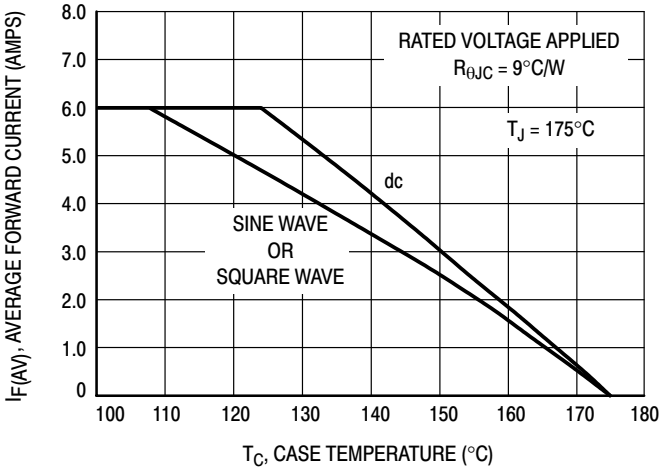


Figure 4. Current Derating, Case (Per Leg)

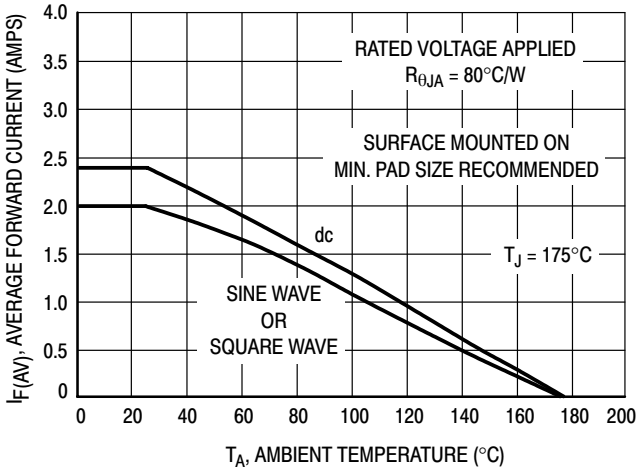


Figure 5. Current Derating, Ambient (Per Leg)

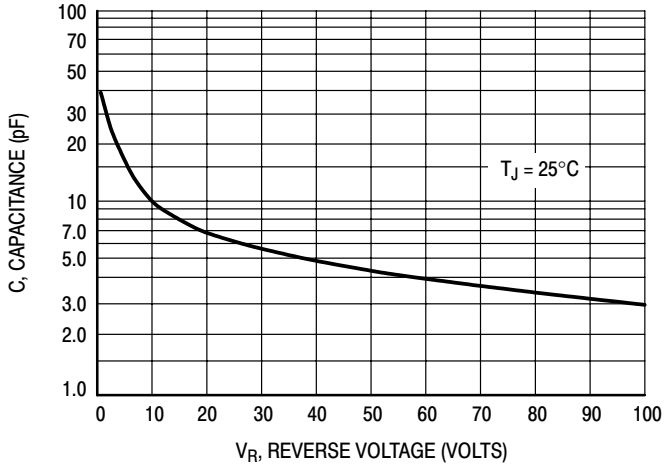
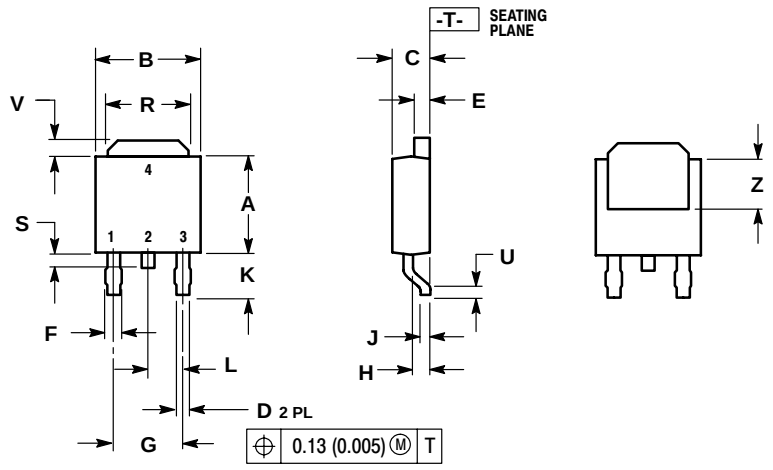


Figure 6. Typical Capacitance (Per Leg)

MURD620CT

PACKAGE DIMENSIONS

DPAK
CASE 369A-13
ISSUE AB



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

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.235	0.250	5.97	6.35
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	0.033	0.040	0.84	1.01
F	0.037	0.047	0.94	1.19
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	0.175	0.215	4.45	5.46
S	0.020	0.050	0.51	1.27
U	0.020	---	0.51	---
V	0.030	0.050	0.77	1.27
Z	0.138	---	3.51	---

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PUBLICATION ORDERING INFORMATION

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