

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

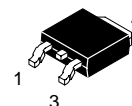
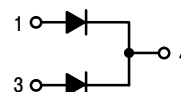
Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	200	V
Average Rectified Forward Current (Rated V_R , $T_C = 140^\circ\text{C}$) Per Diode Per Device	$I_{F(AV)}$	3.0 6.0	A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20 kHz, $T_C = 145^\circ\text{C}$) 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®

<http://onsemi.com>

**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.

MURD620CT

THERMAL CHARACTERISTICS (Per Diode)

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

ELECTRICAL CHARACTERISTICS (Per Diode)

Maximum Instantaneous Forward Voltage Drop (Note 2) ($i_F = 3$ Amps, $T_C = 25^{\circ}C$) ($i_F = 3$ Amps, $T_C = 125^{\circ}C$) ($i_F = 6$ Amps, $T_C = 25^{\circ}C$) ($i_F = 6$ Amps, $T_C = 125^{\circ}C$)	V_F	1 0.96 1.2 1.13	Volts
Maximum Instantaneous Reverse Current (Note 2) ($T_J = 25^{\circ}C$, Rated dc Voltage) ($T_J = 125^{\circ}C$, 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, $T_J = 25^{\circ}C$) ($I_F = 0.5$ Amp, $i_R = 1$ Amp, $I_{REC} = 0.25$ A, $V_R = 30$ V, $T_J = 25^{\circ}C$)	t_{rr}	35 25	ns

- Rating applies when surface mounted on the minimum pad sizes recommended.
- Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

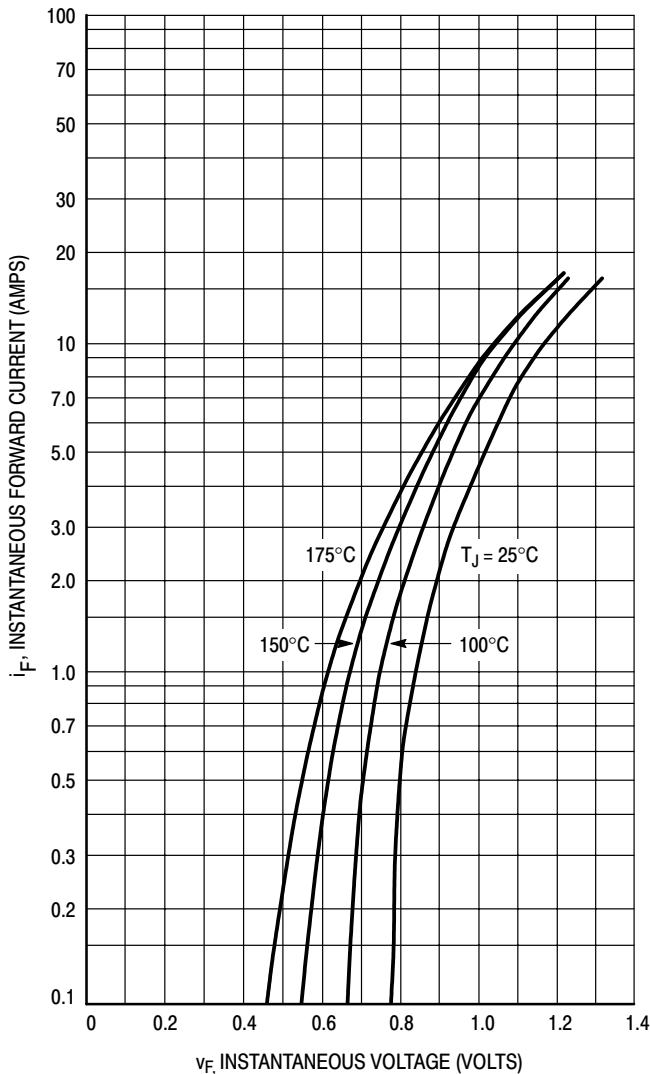


Figure 1. Typical Forward Voltage (Per Leg)

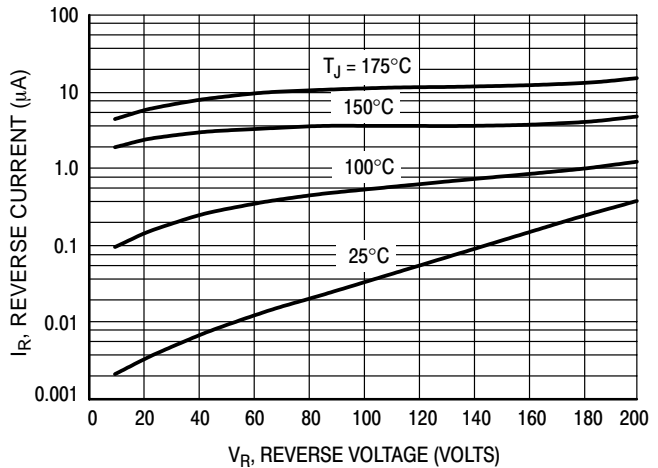


Figure 2. Typical Leakage Current* (Per Leg)

* 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 .

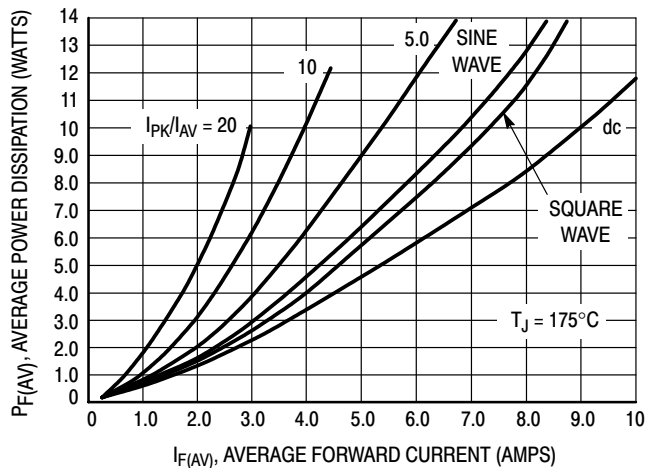


Figure 3. Average Power Dissipation (Per Leg)

MURD620CT

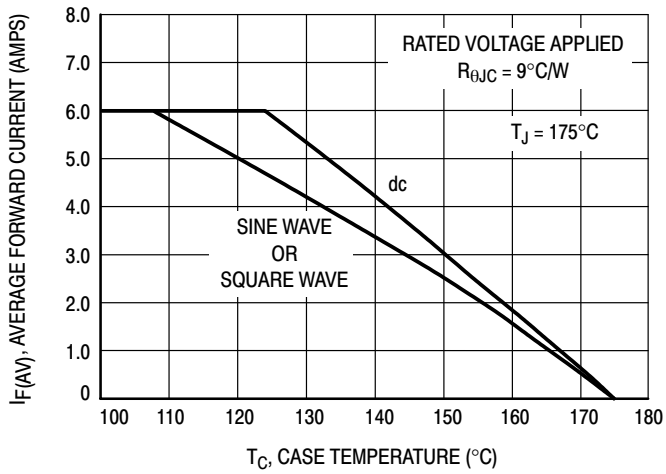


Figure 4. Current Derating, Case (Per Leg)

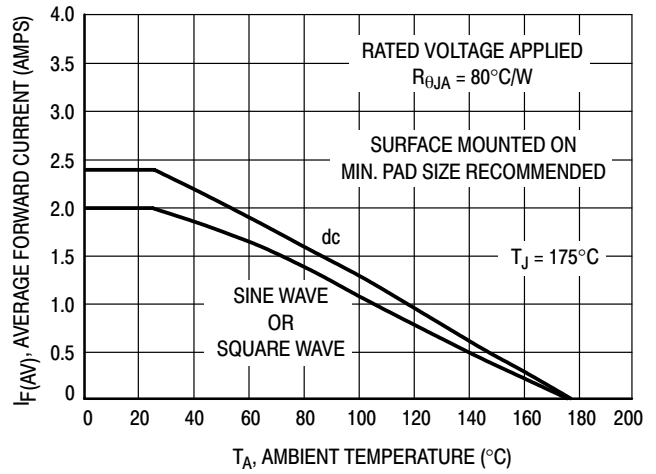


Figure 5. Current Derating, Ambient (Per Leg)

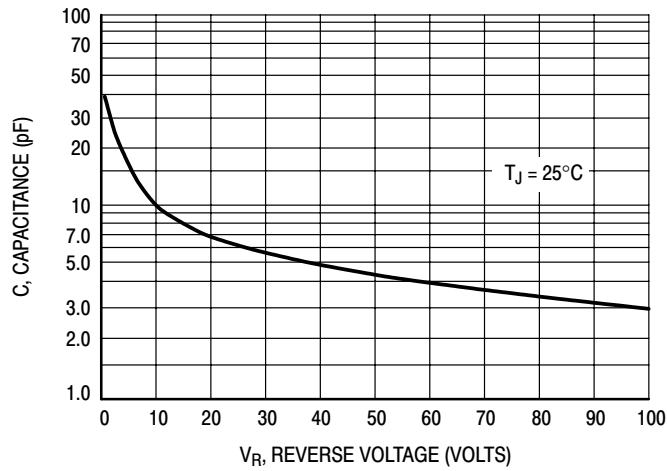


Figure 6. Typical Capacitance (Per Leg)