Preferred Device

SWITCHMODE[™] Power Rectifier

DPAK Surface Mount Package

These state-of-the-art devices are designed for use in switching power supplies, inverters and as free wheeling diodes.

Features

- Ultrafast 35 Nanosecond Recovery Time
- Low Forward Voltage Drop
- Low Leakage
- Pb–Free Packages are Available

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

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
	I _{F(AV)}	3.0 6.0	A
$\begin{array}{l} \mbox{Peak Repetitive Forward Current} \\ (Rated V_R, Square Wave, \\ 20 \mbox{ kHz}, T_C = 145^{\circ}C) & \mbox{Per Diode} \end{array}$	١ _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

THERMAL CHARACTERISTICS (Per Diode)

Rating	Symbol	Value	Unit
Thermal Resistance, Junction-to-Case	R_{\thetaJC}	9	°C/W
Thermal Resistance, Junction-to-Ambient (Note 1)	R_{\thetaJA}	80	°C/W

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.

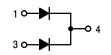
1. Rating applies when surface mounted on the minimum pad sizes recommended.



ON Semiconductor®

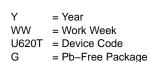
http://onsemi.com

ULTRAFAST RECTIFIER 6.0 AMPERES 200 VOLTS



MARKING DIAGRAM





ORDERING INFORMATION

Device	Package	Shipping [†]
MURD620CT	DPAK	75 Units/Rail
MURD620CTG	DPAK (Pb–Free)	75 Units/Rail
MURD620CTT4	DPAK	2500/Tape & Reel
MURD620CTT4G	DPAK (Pb–Free)	2500/Tape & Reel

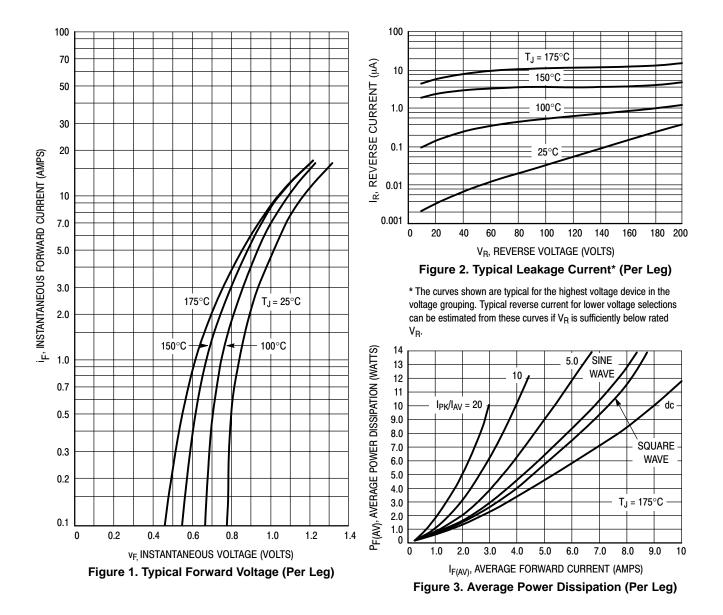
+For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

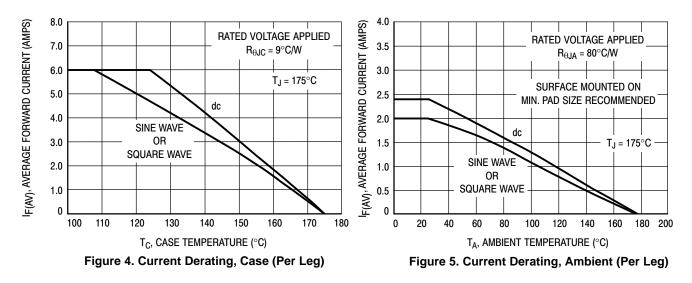
Preferred devices are recommended choices for future use and best overall value.

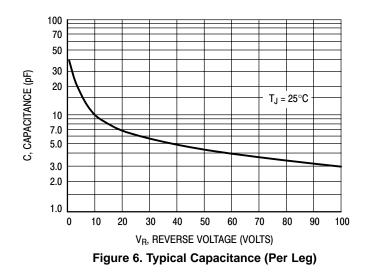
ELECTRICAL CHARACTERISTICS (Per Diode)

Rating	Symbol	Value	Unit
	VF	1 0.96 1.2 1.13	V
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	μΑ
$\begin{array}{l} \mbox{Maximum Reverse Recovery Time} \\ (I_F = 1 \mbox{ Amp, di/dt} = 50 \mbox{ Amps/} \mu s, \mbox{ V}_R = 30 \mbox{ V, } T_J = 25^{\circ}\mbox{C}) \\ (I_F = 0.5 \mbox{ Amp, } i_R = 1 \mbox{ Amp, } I_{REC} = 0.25 \mbox{ A, } \mbox{ V}_R = 30 \mbox{ V, } T_J = 25^{\circ}\mbox{C}) \end{array}$	t _{rr}	35 25	ns

2. Pulse Test: Pulse Width = 300 $\mu s,$ Duty Cycle \leq 2.0%.

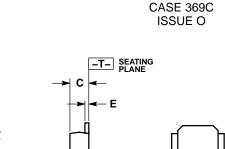






PACKAGE DIMENSIONS

DPAK



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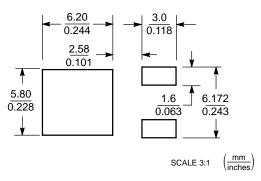
2. CONTROLLING DIMENSION: INCH. MILLIMETERS INCHES DIM MIN MAX MIN MAX 0.235 0.245 5.97 6.22 Α в 0.250 0.265 6.35 6.73 0.086 0.094 2.19 2.38 D 0.027 0.035 0.69 0.88 Е 0.018 0.023 0.46 0.58 F 0.037 0.045 0.94 1.14 G 0.180 BSC 4.58 BSC 0.034 0.040 0.87 1.01 н 0.018 0.023 0.46 0.58 J 0.102 0.114 κ 2.60 2.89 0.090 BSC 2.29 BSC L
 0.180
 0.215
 4.57
 5.45

 0.025
 0.040
 0.63
 1.01
R s **U** 0.020 0.51 0.035 0.050 0.89 1.27 0.155 3.93

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M. 1982

NOTES

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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