

MURHF860CT

Preferred Device

SWITCHMODE™ Power Rectifier

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

Features

- Ultrafast 35 Nanosecond Recovery Times
- 150°C Operating Junction Temperature
- Electrically Isolated. No Isolation Hardware Required
- Epoxy Meets UL 94 V-0 @ 0.125 in
- High Temperature Glass Passivated Junction
- High Voltage Capability to 600 V
- Low Leakage Specified @ 150°C Case Temperature
- Pb-Free Package is Available*

Mechanical Characteristics:

- Case: Epoxy, Molded
- Weight: 1.9 Grams (Approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max for 10 Seconds

MAXIMUM RATINGS (Per Leg)

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 , $T_C = 120^\circ\text{C}$) Total Device	$I_{F(AV)}$	4.0 8.0	A
Peak Repetitive Forward Current (Rated V_R , Square Wave, 20 kHz, $T_C = 120^\circ\text{C}$)	I_{FM}	16	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	100	A
Operating Junction and Storage Temperature Range	T_J, T_{stg}	- 65 to +150	°C

THERMAL CHARACTERISTICS (Per Leg)

Rating	Symbol	Value	Unit
Max Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	4.1	°C/W

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

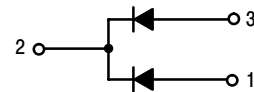
*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.



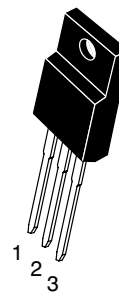
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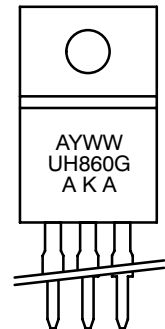
ULTRAFAST RECTIFIER 8.0 AMPERES, 600 VOLTS



MARKING DIAGRAM



ISOLATED TO-220
CASE 221D
STYLE 3



A = Assembly Location
Y = Year
WW = Work Week
UH860 = Device Code
G = Pb-Free Package
AKA = Diode Polarity

ORDERING INFORMATION

Device	Package	Shipping
MURHF860CT	TO-220	50 Units/Rail
MURHF860CTG	TO-220 (Pb-Free)	50 Units/Rail

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

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ELECTRICAL CHARACTERISTICS (Per Leg)

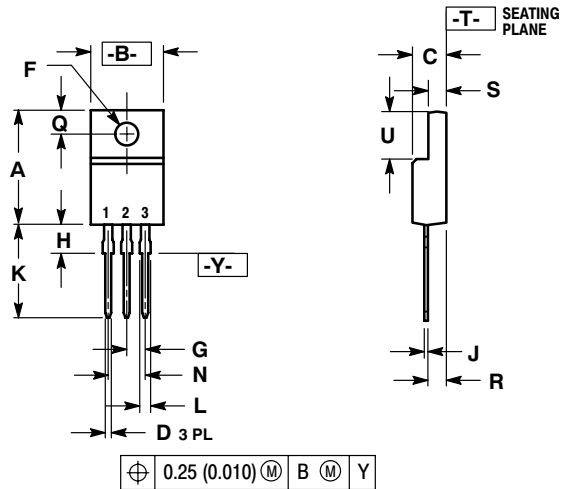
Characteristic	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage (Note 1) ($i_F = 4.0\text{ A}$, $T_C = 150^\circ\text{C}$) ($i_F = 4.0\text{ A}$, $T_C = 25^\circ\text{C}$)	v_F	2.5 2.8	V
Maximum Instantaneous Reverse Current (Note 1) (Rated DC Voltage, $T_C = 150^\circ\text{C}$) (Rated DC Voltage, $T_C = 25^\circ\text{C}$)	i_R	500 10	μA
Maximum Reverse Recovery Time ($I_F = 1.0\text{ A}$, $di/dt = 50\text{ A}/\mu\text{s}$)	t_{rr}	35	ns

1. Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$

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PACKAGE DIMENSIONS

TO-220 FULLPAK
CASE 221D-03
ISSUE J



NOTES:


1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH
3. 221D-01 THRU 221D-02 OBSOLETE, NEW STANDARD 221D-03.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.617	0.635	15.67	16.12
B	0.392	0.419	9.96	10.63
C	0.177	0.193	4.50	4.90
D	0.024	0.039	0.60	1.00
F	0.116	0.129	2.95	3.28
G	0.100 BSC		2.54 BSC	
H	0.118	0.135	3.00	3.43
J	0.018	0.025	0.45	0.63
K	0.503	0.541	12.78	13.73
L	0.048	0.058	1.23	1.47
N	0.200 BSC		5.08 BSC	
Q	0.122	0.138	3.10	3.50
R	0.099	0.117	2.51	2.96
S	0.092	0.113	2.34	2.87
U	0.239	0.271	6.06	6.88

STYLE 3:

- PIN 1. ANODE
2. CATHODE
3. ANODE

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