TAIWAN SEMICONDUCTOR

The Smartest Choice

MUR820 - MUR860

8.0AMP. Glass Passivated Super Fast Rectifiers

TO-220AC

Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ For use in low volyage, high frequency inverter, free wheeling, and polarity protection application.
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Pb-Free

RoHS COMPLIANT

Mechanical Data

- ✧ Case: TO-220AC molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated leads, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260℃/10s/.25", (6.35mm) from case.
- ✧ Weight:1.9 grams

Ordering Information(example)

Part No.	Package	Packing	Packing code	Packing code (Green)
MUR820	TO-220AC	50 / TUBE	C0	C0G

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Parameter	Symbol	MUR820	MUR840	MUR860	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	8			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100			A
Maximum Instantaneous Forward Voltage (Note 1) @ 8 A	V_F	0.975	1.30	1.70	V
Maximum Reverse Current @ T_A=25 ℃ @ T_A=100 ℃	I_R	5 250			uA uA
Maximum Reverse Recovery Time (Note 2)	T_{rr}	25	50		ns
Typical Thermal Resistance	$R_{\theta JC}$	3	2		^{O}C/W
Operating Temperature Range	T_J	-55 to + 175			^{O}C
Storage Temperature Range	T_{STG}	-55 to + 175			^{O}C

Note 1: Pulse lest: tp = 300uS, Duty Cycle<1%

Note 2: Reverse Recovery Test Condition:IF=0.5A, IR=1.0A, IRR=0.25A

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RATINGS AND CHARACTERISTIC CURVES (MUR820 THRU MUR860)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

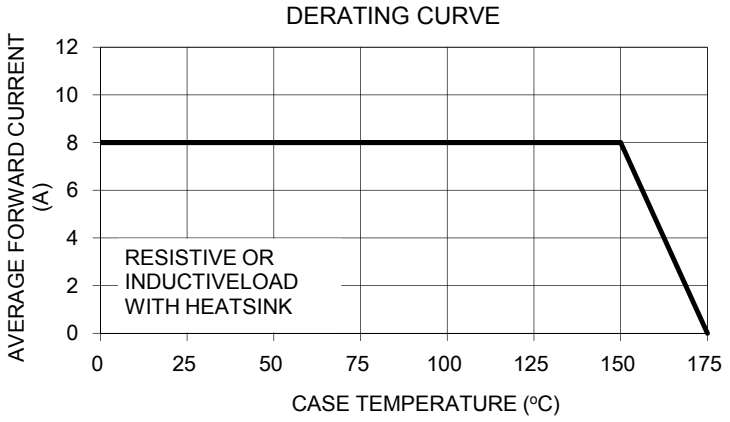


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

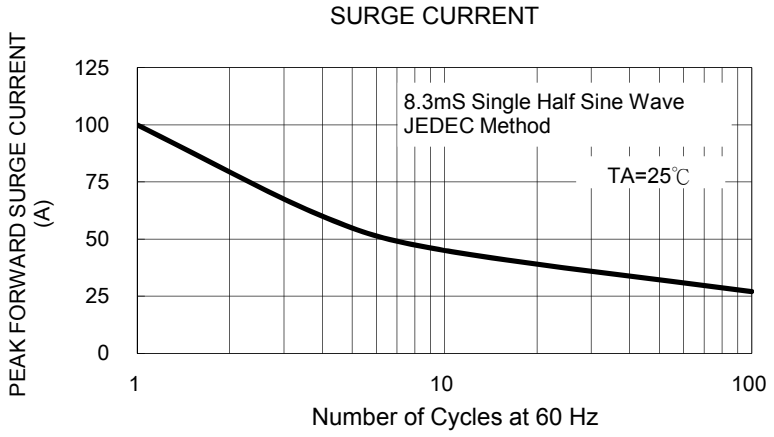


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

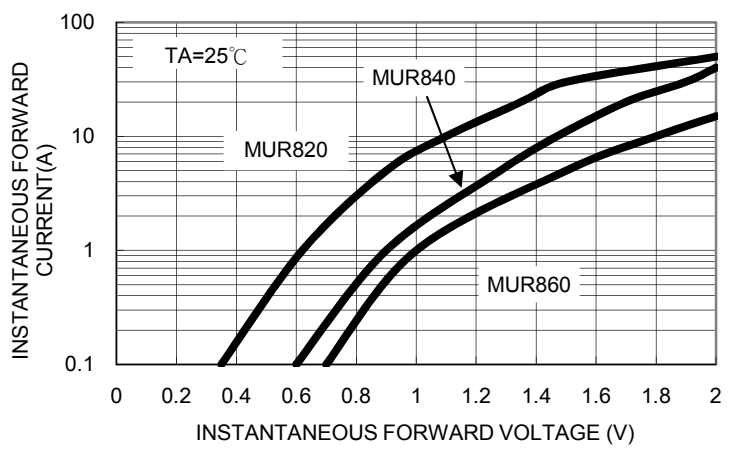


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

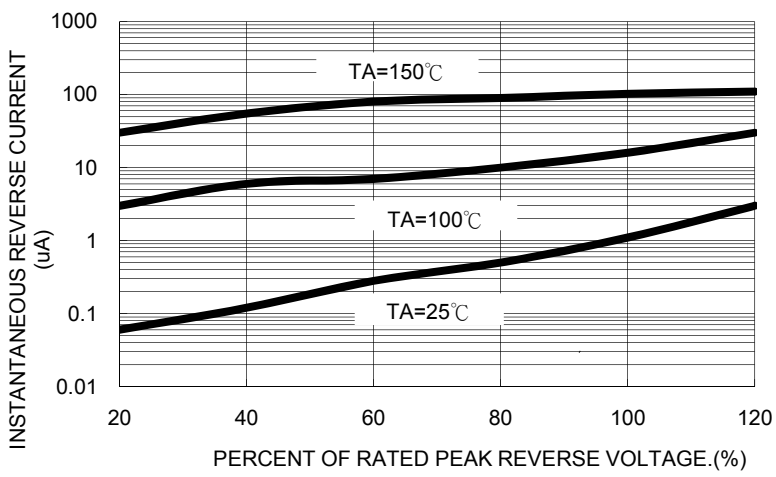


FIG. 5 TYPICAL JUNCTION CAPACITANCE

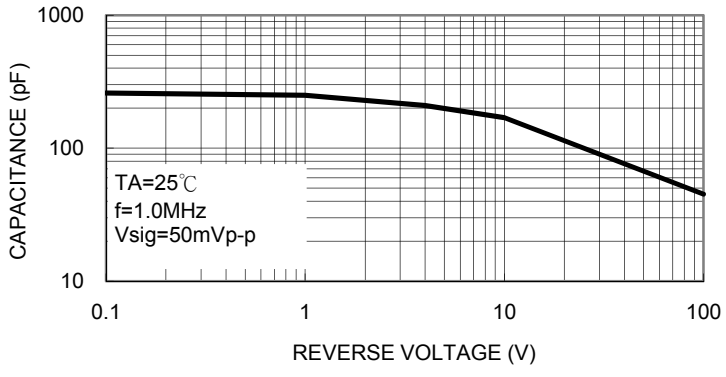
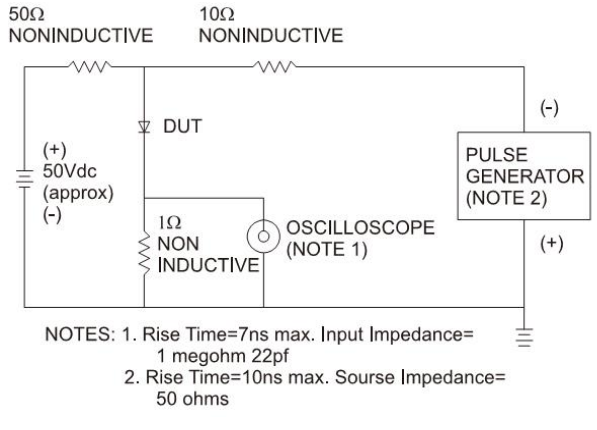
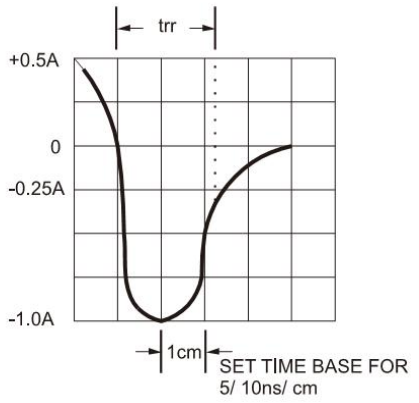


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



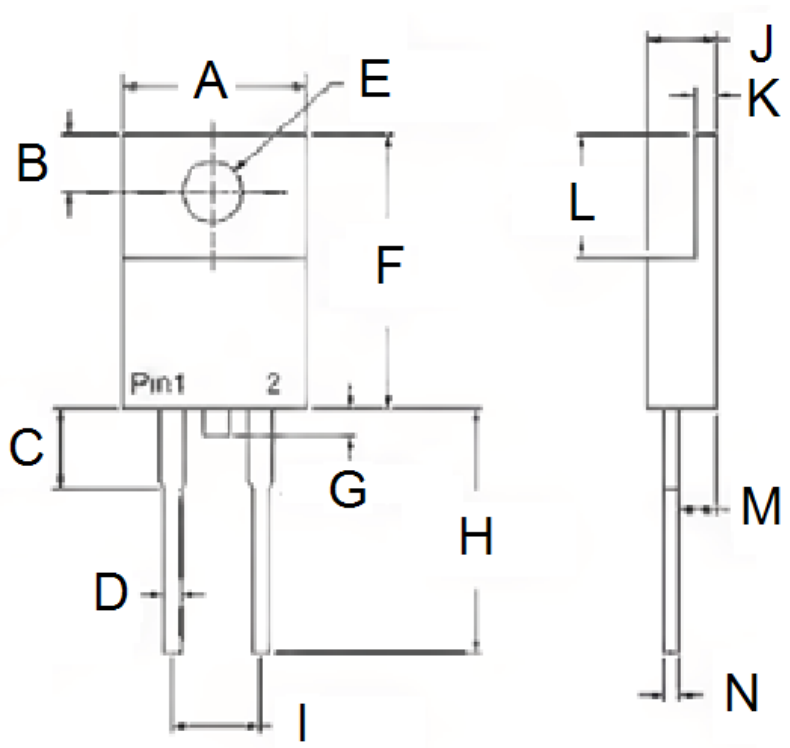


Ordering information

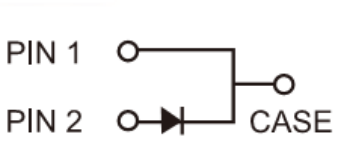
Part No.	Package	BULK Packing	Packing code	Packing code (Green)
MUR8x0	TO-220AC	50 / TUBE	C0	C0G

Note: "xx" is Device Code from "2" thru "6".

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.62	3.44	0.103	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	-	1.60	-	0.063
H	13.19	14.79	0.519	0.582
I	4.95	5.20	0.195	0.205
J	4.42	4.76	0.174	0.187
K	1.14	1.40	0.045	0.055
L	5.84	6.86	0.230	0.270
M	2.20	2.80	0.087	0.110
N	0.35	0.64	0.014	0.025



Marking Diagram

P/N = Specific Device Code
G = Green Compound
YWW = Date Code