

### Features

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



### 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°C/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 °C 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 @ $T_A=25\text{ }^\circ\text{C}$ @ $T_A=100\text{ }^\circ\text{C}$	$I_R$	5 250			uA uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	25	50		ns
Typical Thermal Resistance	$R_{\theta JC}$	3	2		$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to + 175			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 175			$^\circ\text{C}$

Note 1: Pulse test:  $t_p = 300\mu\text{s}$ , Duty Cycle < 1%

Note 2: Reverse Recovery Test Condition:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

## RATINGS AND CHARACTERISTIC CURVES (MUR820 THRU MUR860)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

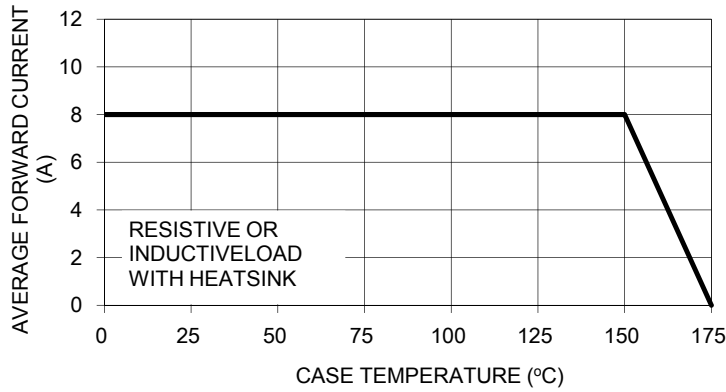


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

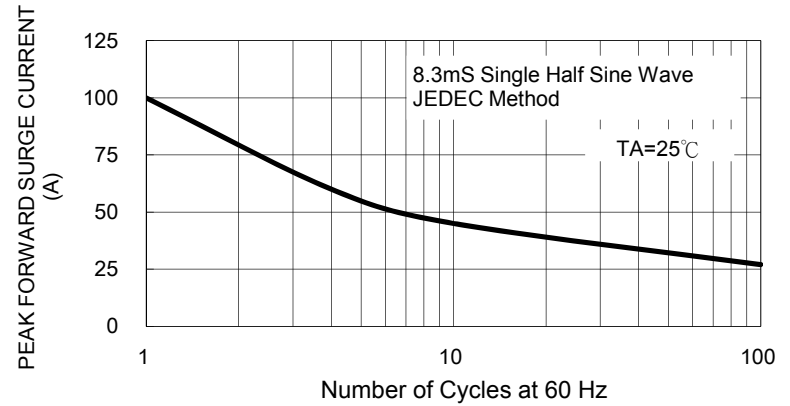


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

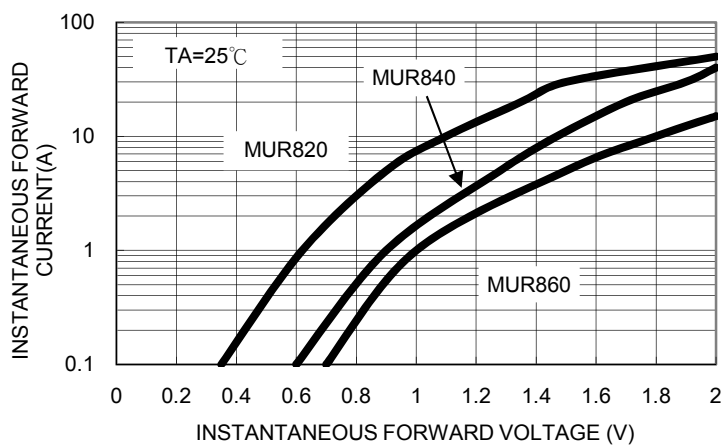


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

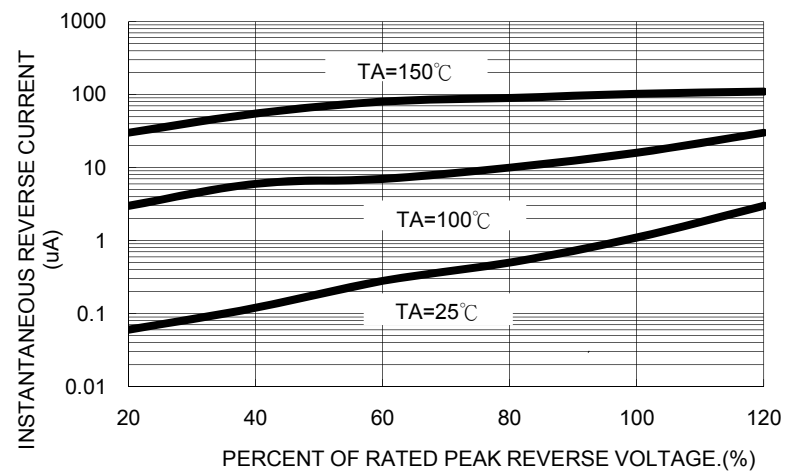


FIG. 5 TYPICAL JUNCTION CAPACITANCE

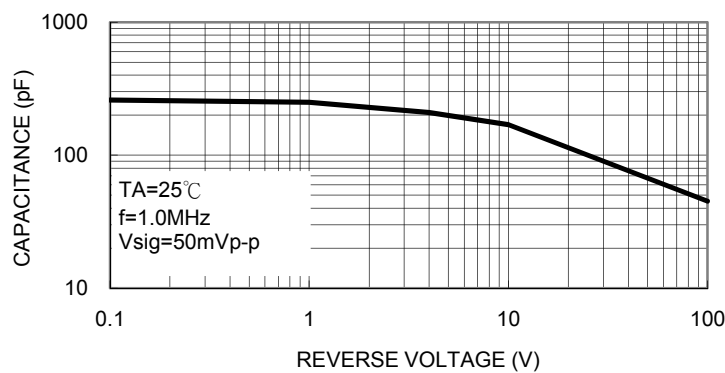
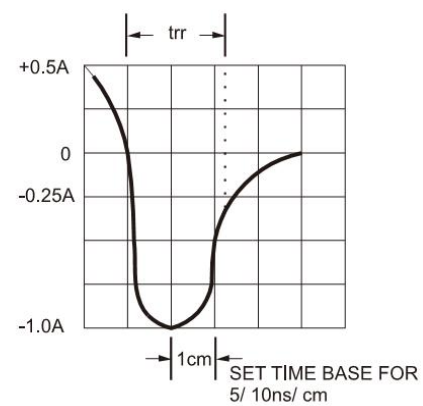
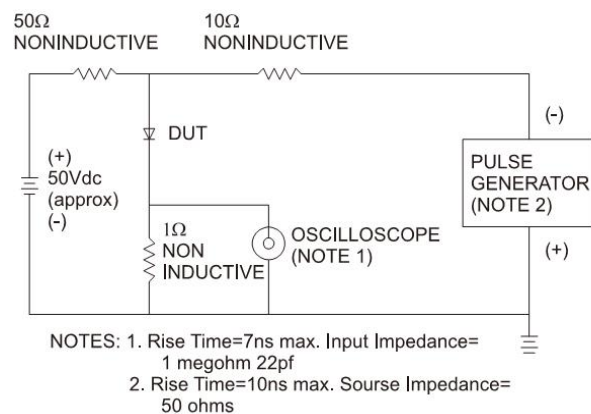


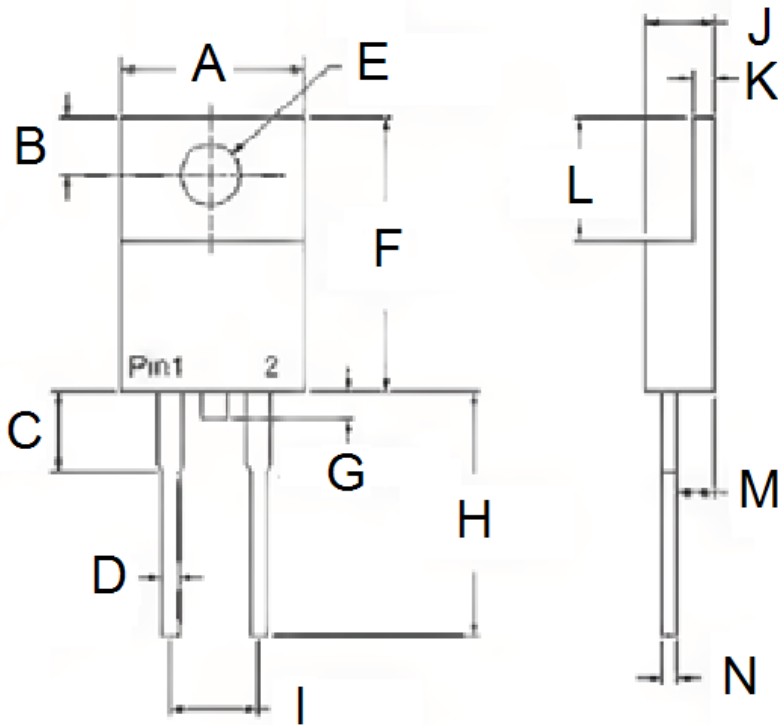
FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



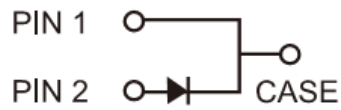
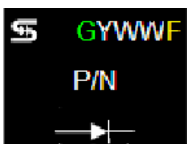
**Ordering information**

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