



MUR820 THRU MUR860

Superfast Recovery Rectifiers

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability.
- High surge capability
- Ultra fast recovery time, high voltage.
- Lead free in comply with EU RoHS.

MECHANICAL DATA

- Case: ITO/TO-220AC molded plastic
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Mounting Position: Any

ITO-220AC



TO-220AC



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	MUR820	MUR840	MUR860	UNITS
Maximum Recurrent 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 at $T_C=100^{\circ}\text{C}$	$I_{F(AV)}$	8			A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80			A
Maximum Forward Voltage at 8A	V_F	1	1.3	1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}\text{C}$ $T_J=125^{\circ}\text{C}$	I_R	10 500			μA
Maximum Thermal Resistance (Note 2)	$R_{\theta JC}$	5			$^{\circ}\text{C} / \text{W}$
Typical Junction Capacitance	C_J	80		50	pF
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35			ns
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150			$^{\circ}\text{C}$

NOTES:

1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
2. Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted





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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 FORWARD CURRENT DERATING CURVE

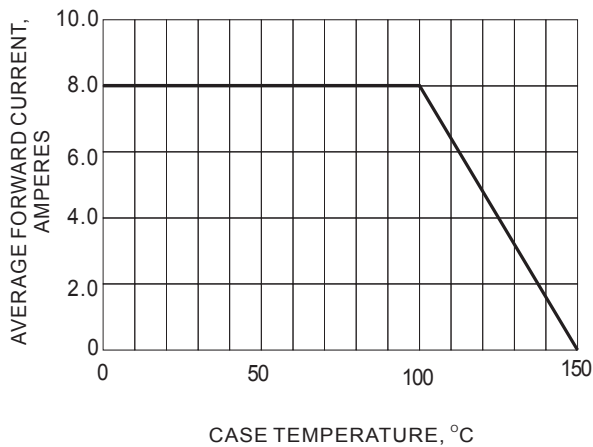


Fig.2 FORWARD CHARACTERISTICS

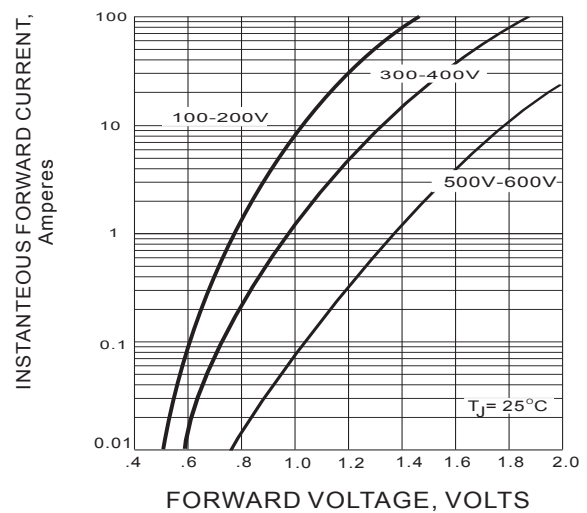


Fig.3 PEAK FORWARD SURGE CURRENT

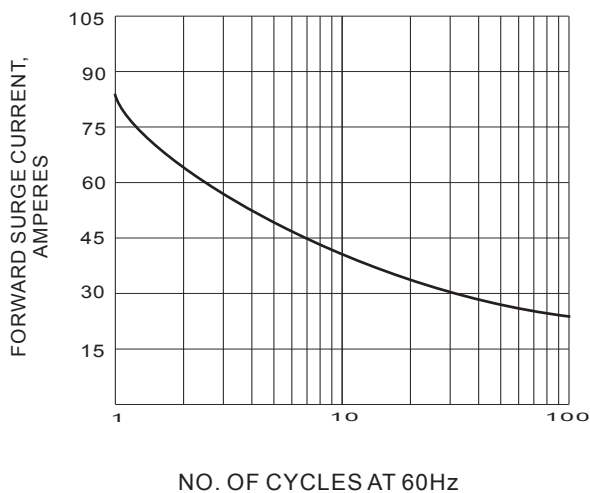
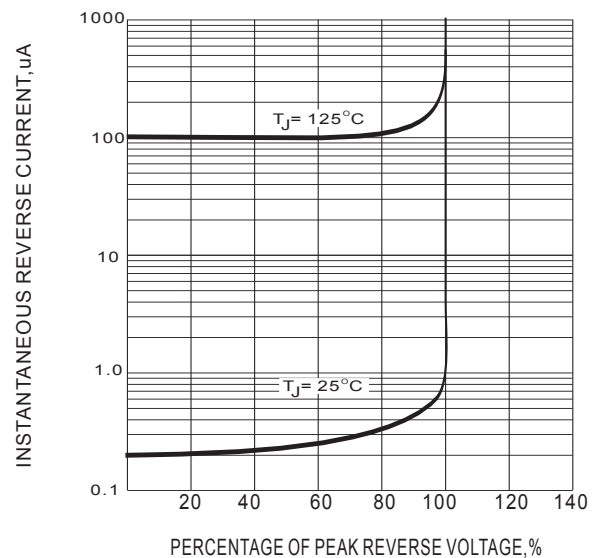


Fig.4 TYPICAL REVERSE CHARACTERISTICS



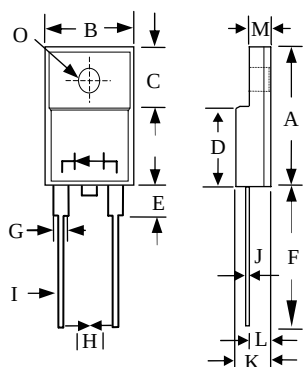


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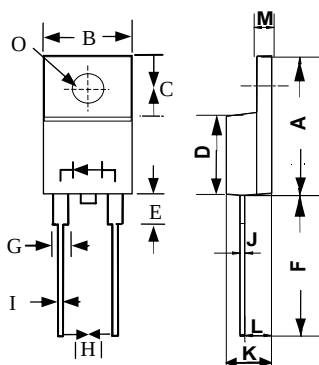
PACKAGE OUTLINE

ITO-220AC



ITO-220AC		
DIM.	MIN.	MAX.
A	14.90	15.90
B	9.90	10.40
C	6.45	6.95
D	8.05	8.85
E	2.90	3.90
F	12.8	—
G	1.10	1.4
H	4.95	5.05
I	0.45	0.95
J	0.40	0.65
K	4.35	4.80
L	2.45	2.85
M	2.50	2.85
O	∅3.00	∅3.50
All Dimensions in millimeter		

TO-220AC



TO-220AB		
DIM.	MIN.	MAX.
A	14.50	15.50
B	9.90	10.40
C	6.05	6.65
D	8.05	8.85
E	2.90	3.90
F	12.80	—
G	1.10	1.40
H	4.95	5.05
I	0.45	0.95
J	0.40	0.65
K	4.35	4.75
L	2.45	2.85
M	1.15	1.45
O	∅3.55	∅3.85
All Dimensions in millimeter		

