

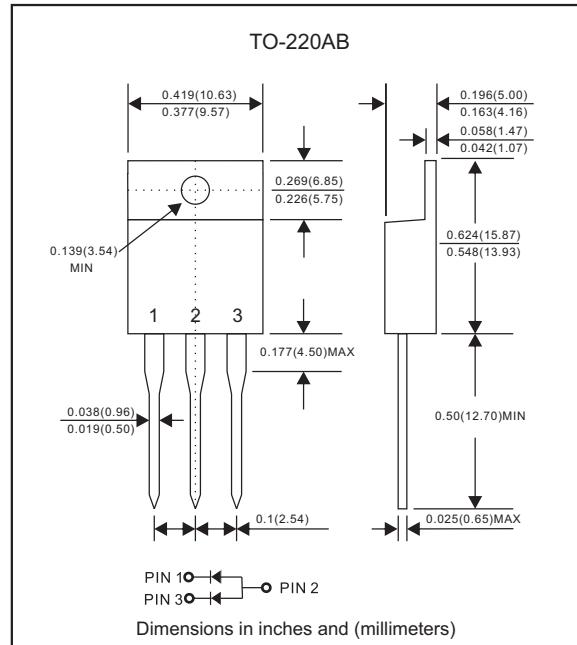
### Features

- Dual rectifier construction, positive centetap, offer 15.0A Half wave and 30.0A full wave rectification.
- High surge current capability.
- Super fast recovery time for switching mode application.
- Low power loss.
- Glass passivated chip junctions.
- Lead-free parts meet environmental standards of MIL-STD-19500/228

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : JEDEC TO-220AB molded plastic body over passivated chip
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guranteed
- Polarity: As marked
- Mounting Position : Any

### Package outline



### Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	MUR3020CA	MUR3040CA	MUR3060CA	UNIT
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	$I_o$	30			A
Peak forward surge current 8.3ms single half sine-wave(JEDEC method)	$I_{FSM}$	150			A
Operating junction temperature range	$T_J$	-55 to +150			$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-65 to +175			$^{\circ}\text{C}$

### Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOLS	MUR3020CA	MUR3040CA	MUR3060CA	UNIT
Maximum forward voltage per leg at $I_F=15\text{A}$	$V_F$	1.05	1.35	1.70	V
Maximum reverse recovery time per leg (Note 1)	$t_{rr}$	25	50		ns
Maximum DC reverse current at $T_J=25^{\circ}\text{C}$ at rated DC blocking voltage per leg at $T_J=125^{\circ}\text{C}$	$I_R$	5.0 500			$\mu\text{A}$ $\mu\text{A}$

### Thermal Characteristics

PARAMETER	SYMBOLS	MUR3020CA	MUR3040CA	MUR3060CA	UNIT
Typical thermal resistance junction to case per leg	$R_{\theta JC}$	1.5			$^{\circ}\text{C}/\text{W}$

Note 1: Reverse recovery time test condition,  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

## Rating and characteristic curves(MUR3020CA THRU MUR3060CA)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

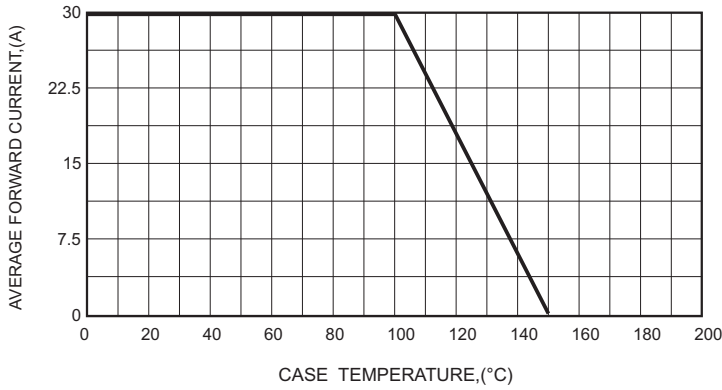


FIG.2-TYPICAL FORWARD CHARACTERISTICS

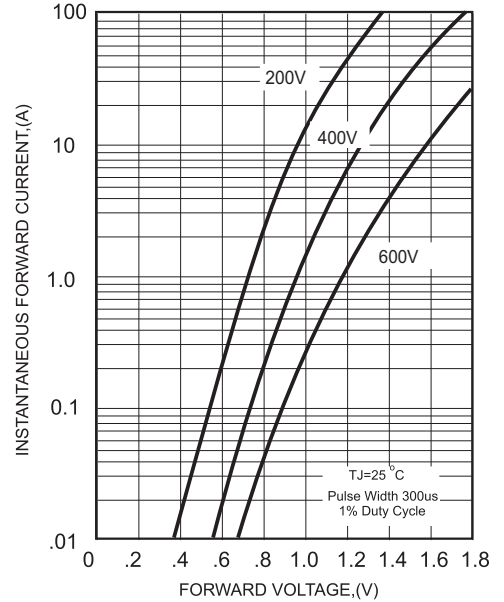


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

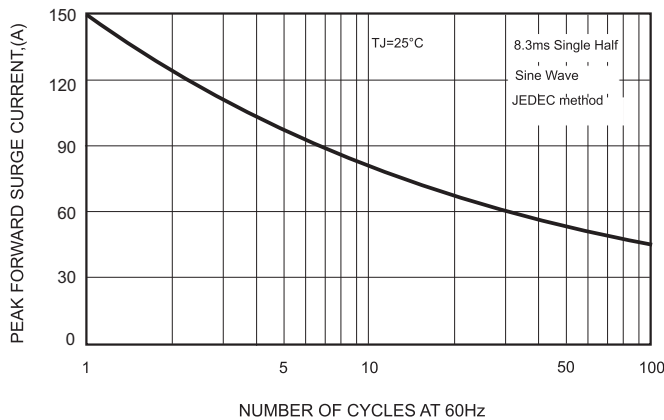


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

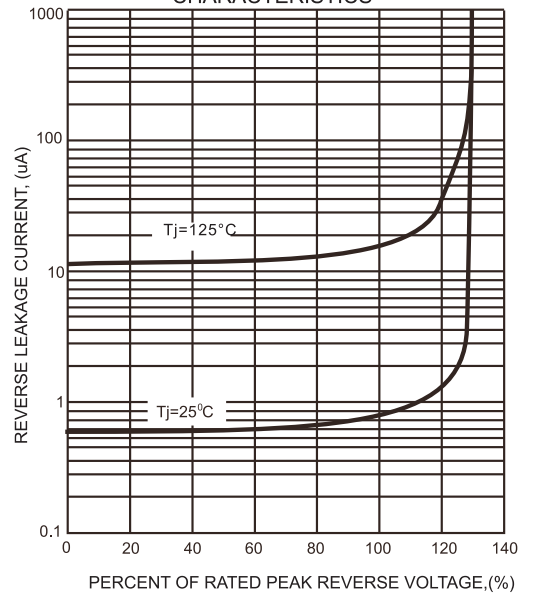
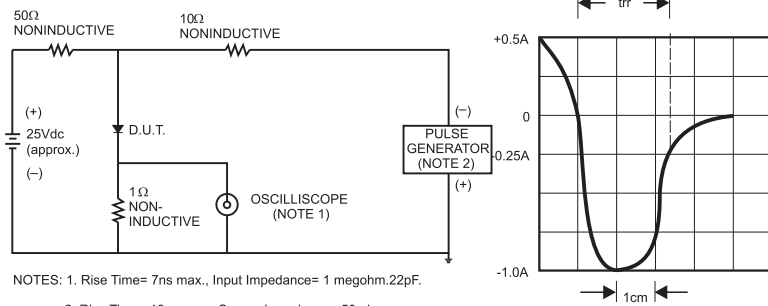


FIG.5- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

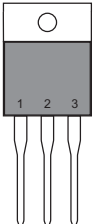
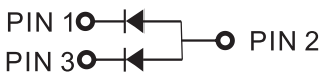


NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm,22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

SET TIME BASE FOR  
50 / 10ns / cm

## Pinning information

Pin	Simplified outline	Symbol
Pin1 anode Pin2 cathode Pin3 anode		

## Marking

Type number	Marking code
MUR3020CA	MUR3020CA
MUR3040CA	MUR3040CA
MUR3060CA	MUR3060CA