

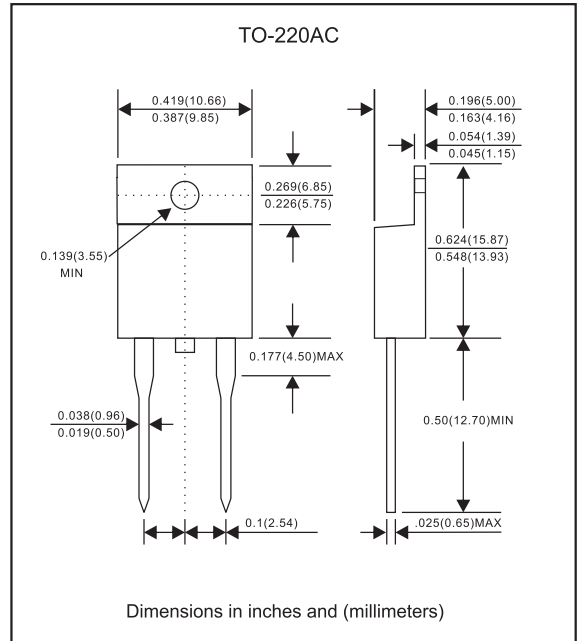
### Features

- Low forward voltage, high current capability
- 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-220AC molded plastic body over passivated chip
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: As marked
- Mounting Position : Any

### Package outline



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

PARAMETER	SYMBOLS	MUR1520	MUR1540	MUR1560	UNIT
Maximum repetitive peak reverse voltage	VRRM	200	400	600	V
Maximum RMS voltage	VRMS	140	280	420	V
Maximum DC blocking voltage	VDC	200	400	600	V
Maximum average forward rectified current	IO	15			A
Peak forward surge current 8.3ms single half sine-wave (JEDEC method)	IFSM	200			A
Operating junction temperature range	TJ	-55 to +150			°C
Storage temperature range	TSTG	-65 to +175			°C

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

PARAMETER	SYMBOLS	MUR1520	MUR1540	MUR1560	UNIT
Maximum forward voltage at IF=15A	VF	0.98	1.30	1.70	V
Maximum DC reverse current at rated DC blocking voltage	IR	5.0 500			uA uA
Maximum reverse recovery time (Note 1)	trr	50			ns

### Thermal Characteristics

PARAMETER	SYMBOLS	MUR1520	MUR1540	MUR1560	UNIT
Typical thermal resistance junction to case	RθJC	1.5			°C/W

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

# Rating and characteristic curves (MUR1520 THRU MUR1560)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

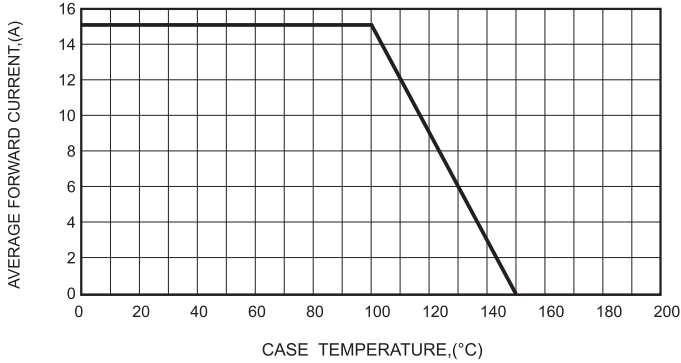


FIG.2-TYPICAL FORWARD CHARACTERISTICS

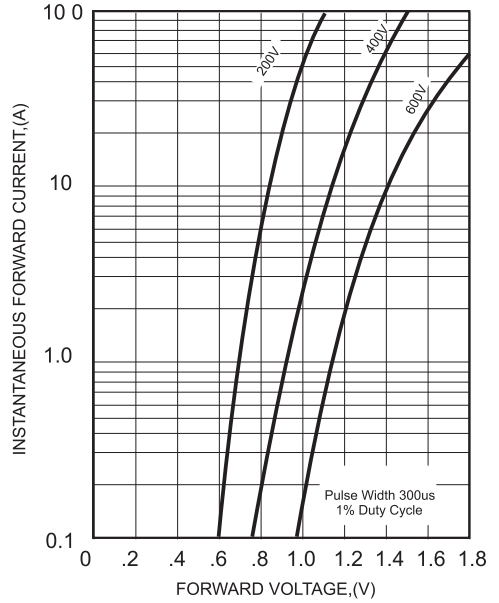


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

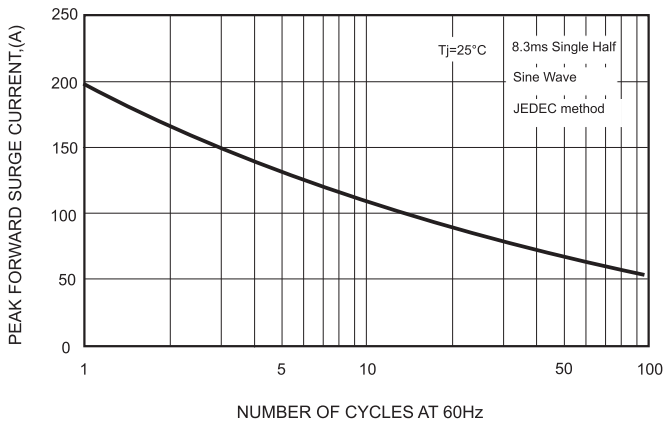


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

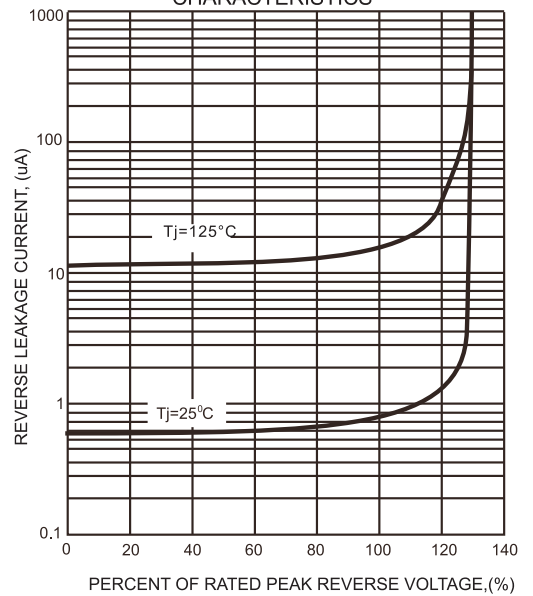
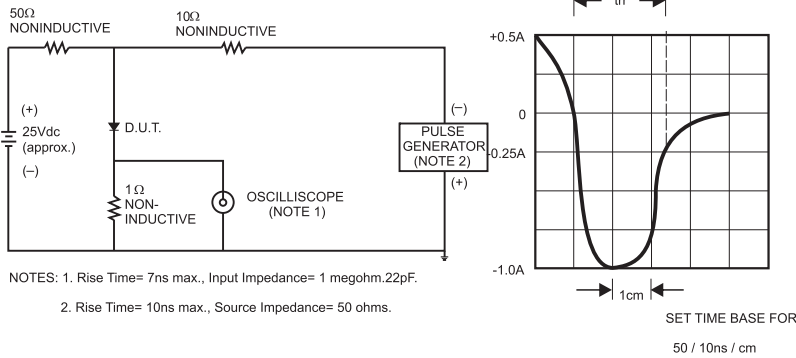


FIG.5- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

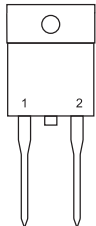
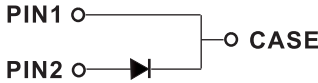


NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



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AS-3040114	2003/03/08	2023/09/07	E	3

### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
MUR1520	MUR1520
MUR1540	MUR1540
MUR1560	MUR1560