

## Ultra-Fast Recovery Diodes

### Features

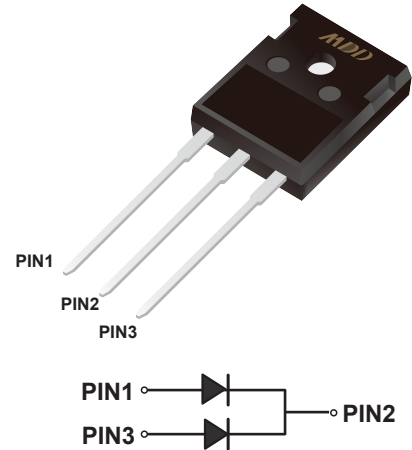
- ◆ High frequency operation.
- ◆ High surge forward current capability
- ◆ High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- ◆ Guard ring for enhanced ruggedness and long term reliability
- ◆ Low forward Voltage drop

**TO-247-3L**



### Mechanical Data

**Case:** JEDEC TO-247-3L Molded plastic body Lead free finish, RoHS compliant  
**Polarity:** As marked



### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symble	MDD MURW4020DCT	MDD MURW4040DCT	MDD MURW4060DCT	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	$I_{F(AV)}$		20 40		A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg)	$I_{FSM}$		250		A
Max Instantaneous Forward Voltage at 20 A (Per leg)	$V_F$	1.0	1.3	1.6	V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$	$I_R$		10 500		$\mu\text{A}$
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$		35		ns
Typical Thermal Resistance	$R_{\theta JC}$		4		$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_j$		-55 ~ +175		$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$		-55 ~ +175		$^\circ\text{C}$

NOTE 1: Reverse recovery test conditions  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

## Ratings And Characteristic Curves

Fig.1 Forward Current Derating Curve

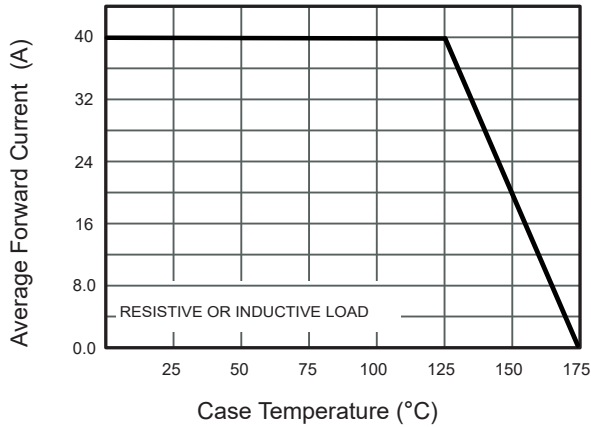


Fig.2 Typical Instantaneous Reverse Characteristics

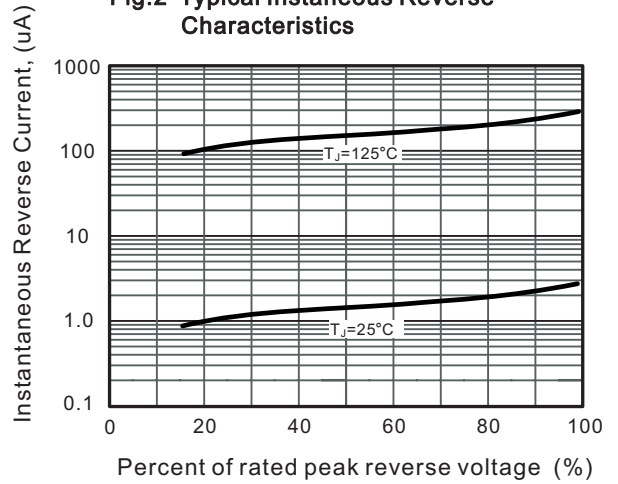


Fig.3 Typical Forward Characteristic

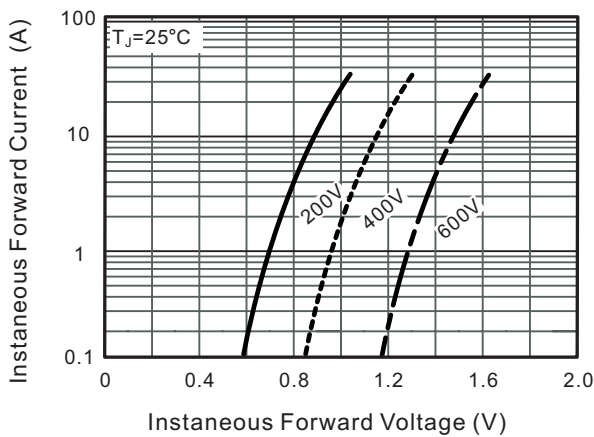
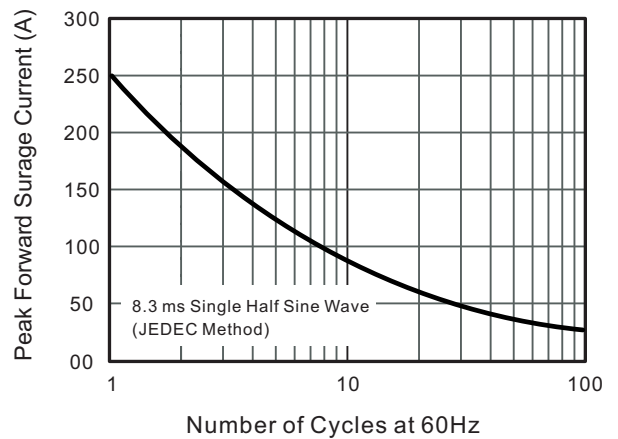


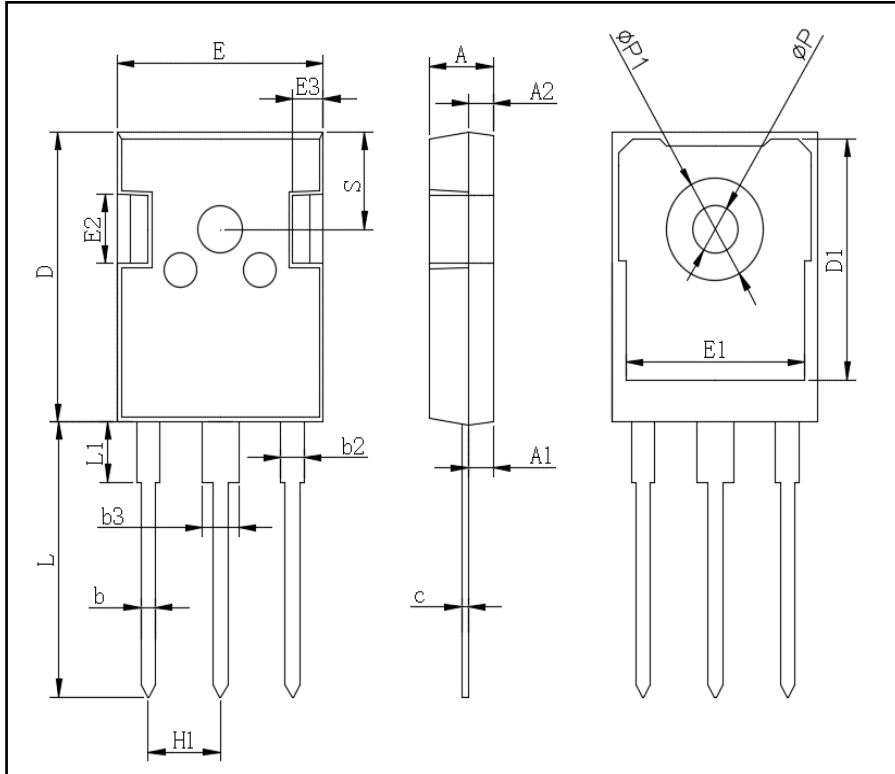
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

## Outlitne

### TO-247-3L Package Outline Dimensions



TO-247-3L		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.0	1.4
b2	1.91	2.21
C	0.5	0.7
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.0	13.6
E2	4.80	5.20
E3	2.30	2.70
L	19.62	20.22
L1	-	4.30
$\phi P$	3.40	3.80
$\phi P1$	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20