



Features

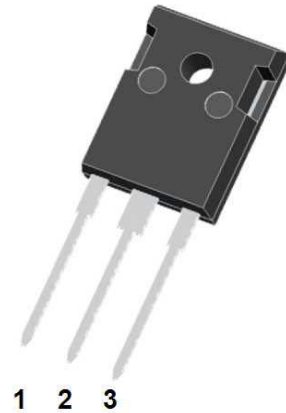
- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

Typical Applications

- Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** TO-247AB
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



	V_{RSM} V	V_{RRM} V
MUR3060PT	600	600

■ Maximum Ratings ($T_j=25^\circ\text{C}$ Unless otherwise specified)

Symbol	Test Conditions	Maximum Ratings	Unit	
I_{FRMS}	$T_{VJ}=T_{VJM}$	25	A	
I_{FAVM}	$T_c=100^\circ\text{C}$; rectangular, $d=0.5$	30		
I_{FRM}	$t_p < 10\mu\text{s}$; rep. rating, pulse width limited by T_{VJM}	150		
I_{FSM}	$T_{VJ}=45^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	100 110	A
	$T_{VJ}=150^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	85 95	
I^2t	$T_{VJ}=45^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	50 50	A^2s
	$T_{VJ}=150^\circ\text{C}$	$t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	36 37	
T_{VJ}		-40...+150	$^\circ\text{C}$	
T_{VJM}		150		
T_{stg}		-40...+150		
P_{tot}	$T_c=25^\circ\text{C}$	62	W	
M_d	Mounting torque	0.4...0.6	Nm	
Weight	typical	6	g	



■Electrical Characteristics (T_j=25°C Unless otherwise specified)

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I _R	T _{VJ} =25°C; V _R =V _{R_{RRM}}		50	uA
	T _{VJ} =25°C; V _R =0.8·V _{R_{RRM}}		25	uA
	T _{VJ} =125°C; V _R =0.8·V _{R_{RRM}}		3	mA
V _F	I _F =15A; T _{VJ} =150°C		1.5	V
	T _{VJ} =25°C		1.7	
V _{To}	For power-loss calculations only		1.12	V
r _T	T _{VJ} =T _{VJM}		23.2	mΩ
R _{thJC} R _{thCK} R _{thJA}		0.5	2	K/W
			60	
t _{rr}	I _F =1A; -di/dt=50A/us; V _R =30V; T _{VJ} =25°C	35	50	ns
I _{RM}	V _R =350V; I _F =15A; -di _F /dt=100A/us; L≤0.05uH; T _{VJ} =100°C	4	4.4	A

■Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR3060PT
Thermal Resistance	Between junction and case	R _{θJ-C}	°CW	1.0
	Between junction and Air	R _{θJ-A}	°CW	50

Fig. 7 Transient thermal impedance junction to case.

■ Characteristics(Typical)

Fig. 1 Forward current versus voltage drop.

Fig. 2 Recovery charge versus $-di_F/dt$.

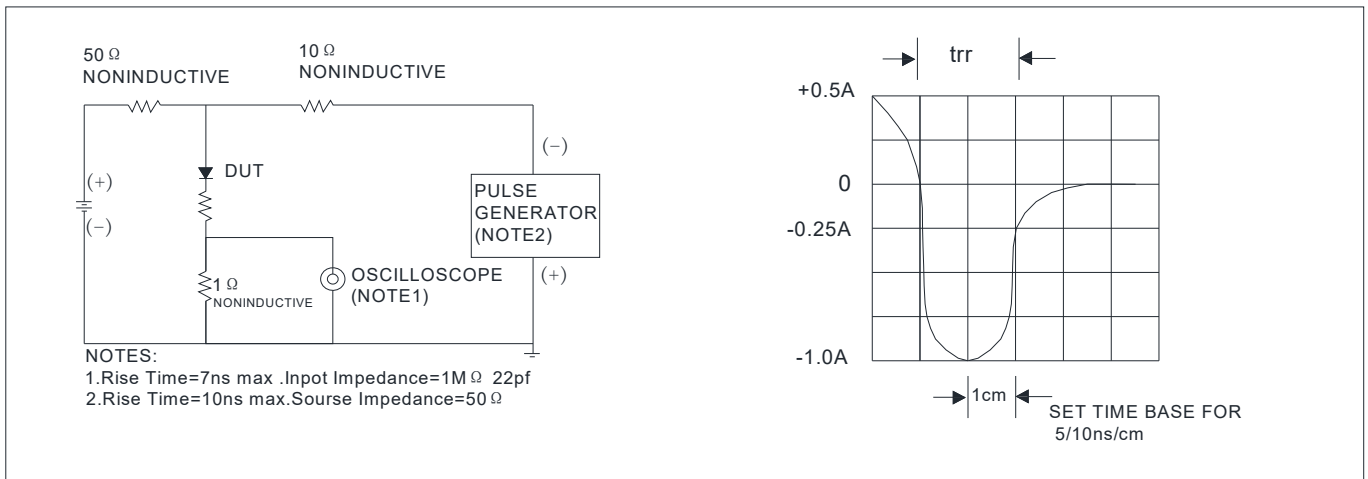
Fig. 3 Peak reverse current versus $-di_F/dt$.

Fig. 4 Dynamic parameters versus junction temperature.

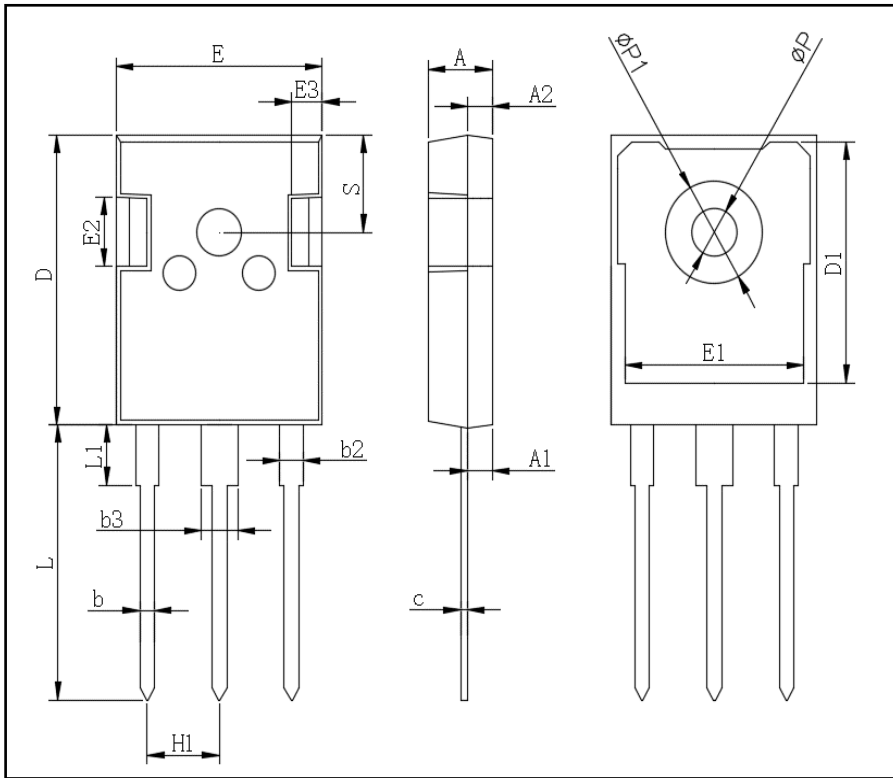
Fig. 5 Recovery time versus $-di_F/dt$.

Fig. 6 Peak forward voltage versus di_F/dt .

FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



TO-247AB		
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
ΦP	3.40	3.80
ΦP1	-	7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20

Packge	Packing	Box Size L×W×H(mm)	Quaty(pcs/box)	Carton Size L×W×H(mm)	Quaty(pcs/carton)
TO-247	30pcs/Tube	570×155×50	450	580×340×125	1800