

Ultra-Fast Recovery Diodes 30A*2 FRED

Product Features

- Glass Passivated Protection Construction
- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Forward Voltage and Low Leakage Current
- High Current capability and High reliability

Applications

- Freewheeling, Rectification, Clamp
- Snubber Diode
- Switch Power Supplies
- Motor Control
- Inverters, Frequency Converters
- Power Factor Correction

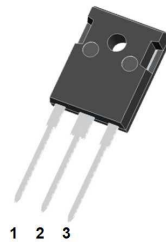
产品特点

- 玻璃钝化保护结构
- 超快恢复时间
- 软恢复特性
- 低正向压降，低漏电流
- 高的电流能力，高的可靠性

应用

- 续流、整流、箝位
- 缓冲二极管
- 开关电源
- 电动机控制
- 逆变器、变频器
- 功率因数校正（PFC）

Part Number 型号	Package 封装
MUR6060PT	TO-247-3L



■Maximum Ratings (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR3060PT
Device marking code			MUR6060PT
Repetitive Peak Reverse Voltage	V _{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	60
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	300
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	373
Single Pulse Avalanche Energy @ T _p =40uS, T _j =25°C,L=15mH	EAS	mJ	385
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	195

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=30.0A$ @ $T_J=25^{\circ}C$	-	1.45	1.6
			$I_{FM}=30.0A$ @ $T_J=150^{\circ}C$		1.25	1.45
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	$V_{RM}=V_{RRM}$ $T_J=25^{\circ}C$	-	-	5.0
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_J=150^{\circ}C$	-	65	200
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_J=25^{\circ}C$	-	38	50
			$T_J=25^{\circ}C$	-	55	-
			$T_J=125^{\circ}C$	-	70	-
Peak recovery current	I_{RRM}	A	$T_J=25^{\circ}C$	-	5.5	-
			$T_J=125^{\circ}C$	-	13	-
Reverse recovery charge	Q_{rr}	nC	$T_J=25^{\circ}C$	-	300	-
			$T_J=125^{\circ}C$	-	1150	-

■Thermal Characteristics ($T_J=25^{\circ}C$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR6060PT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}CW$	1.0
	Between junction and Air	$R_{\theta J-A}$	$^{\circ}CW$	50

■ Characteristics(Typical)

FIG1: I_o - T_c Curve

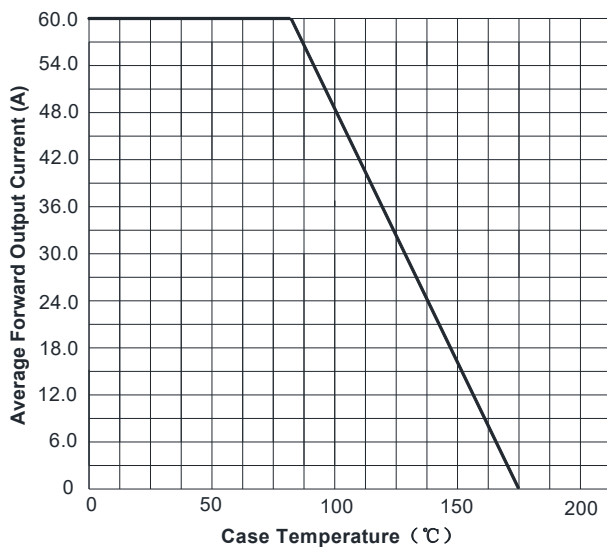


FIG2: Surge Forward Current Capability

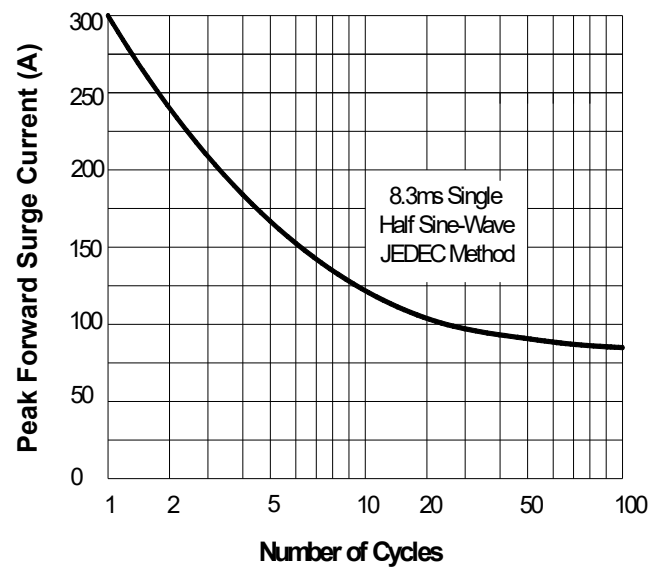


FIG3: Forward Voltage

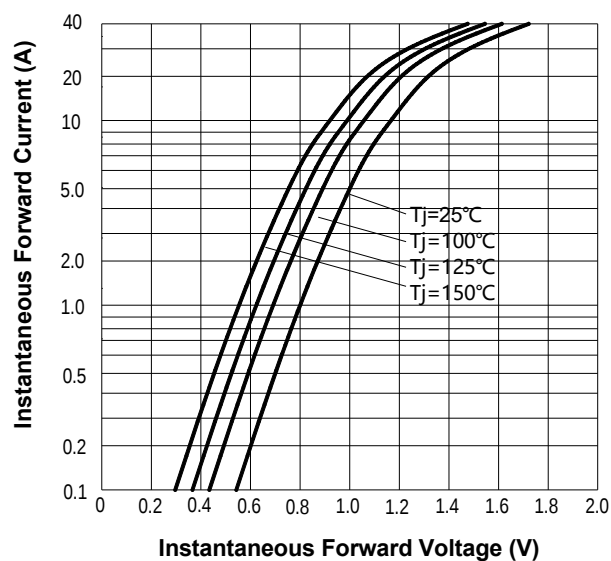


FIG.4: Instantaneous Reverse Characteristics

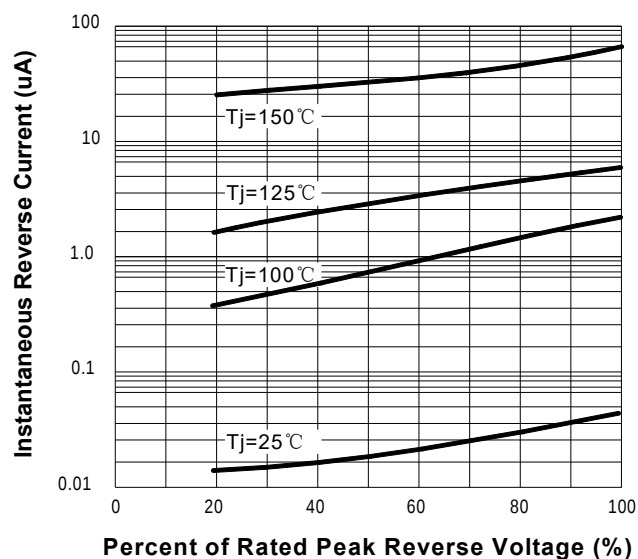
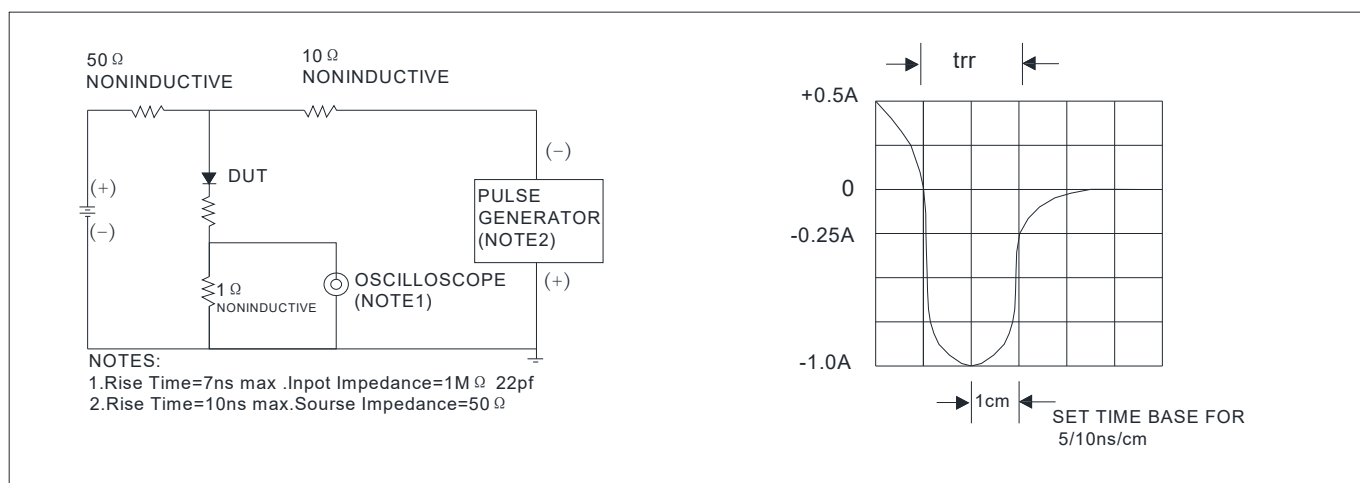
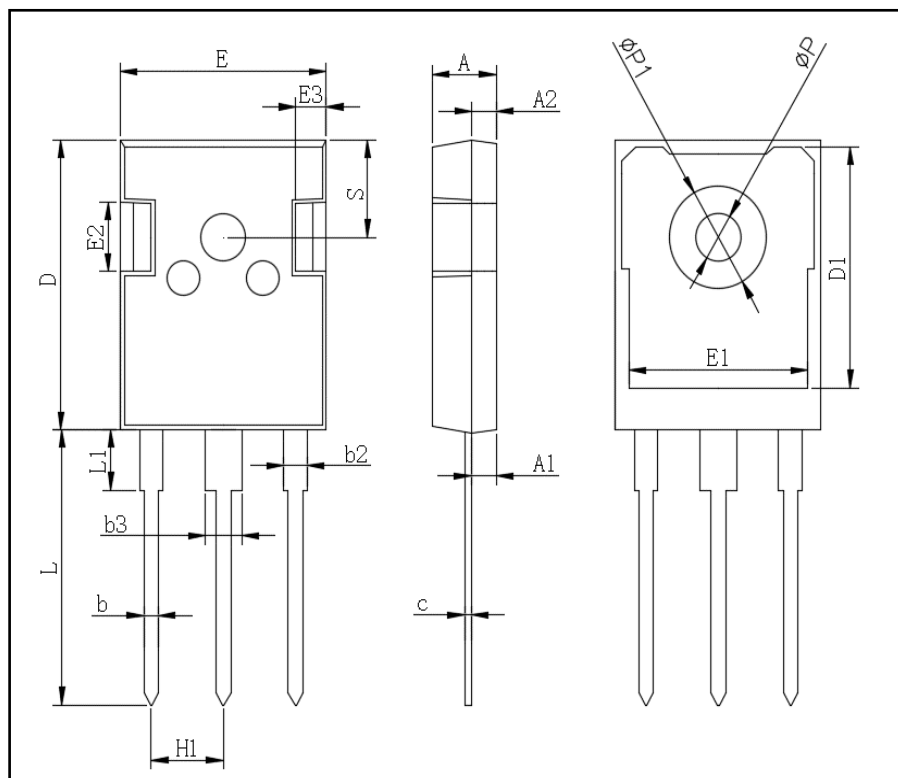


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ 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