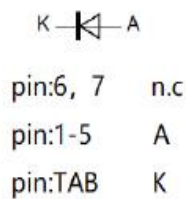


Ultra-Fast Recovery Diodes 60A FRED



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:** T2PAK
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

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

PARAMETER	SYMBOL	UNIT	MUR6065KL
Device marking code			MUR6065KL
Repetitive Peak Reverse Voltage	VRRM	V	650
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 _a =25°C	I _{FSM}	A	420
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	732
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	C _j	pF	167



MUR6065KL

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=60.0A$ @ $T_J=25^{\circ}C$	-	1.75	2.2
			$I_{FM}=60.0A$ @ $T_J=125^{\circ}C$		1.5	2.0
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	μA	$V_{RM}=V_{RRM}$ $T_J=25^{\circ}C$	-	-	5.0
	I_{RRM2}		$V_{RM}=V_{RRM}$ $T_J=125^{\circ}C$	-	-	200
Reverse Recovery Time	T_{rr}	ns	$I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_J=25^{\circ}C$	-	35	60
			$T_J=25^{\circ}C$	-	47.4	-
			$T_J=125^{\circ}C$	-	67.2	-
Peak recovery current	I_{RRM}	A	$T_J=25^{\circ}C$	-	14.5	-
			$T_J=125^{\circ}C$	-	34.0	-
Reverse recovery charge	Q_{rr}	nC	$T_J=25^{\circ}C$	-	505	-
			$T_J=125^{\circ}C$	-	1549	-

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

PARAMETER		SYMBOL	UNIT	MUR6060KL
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}C/W$	1.0
	Between junction and Air	$R_{\theta J-A}$	$^{\circ}C/W$	35

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR6060KL	Approximate 2.3	700	700	3500	Reel



■ Characteristics(Typical)

FIG1: I_o - T_c Curve

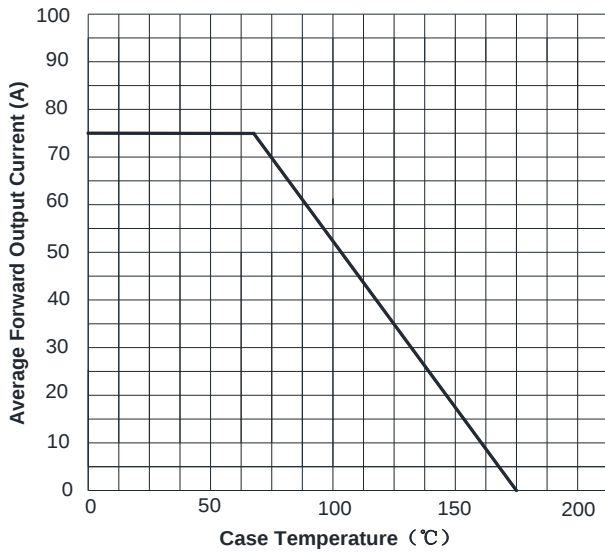


FIG2: Surge Forward Current Capability

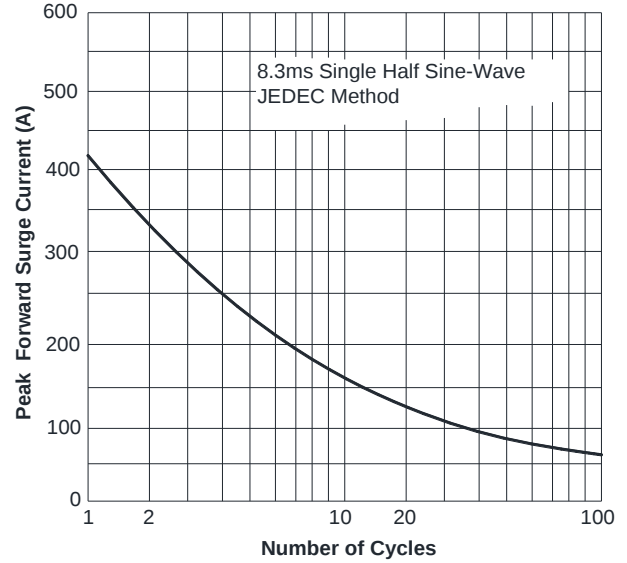


FIG3: Forward Voltage

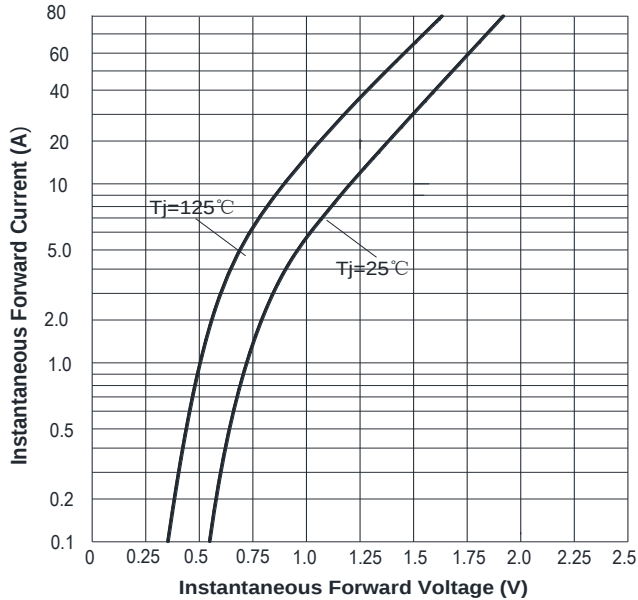


FIG.4: Instantaneous Reverse Characteristics

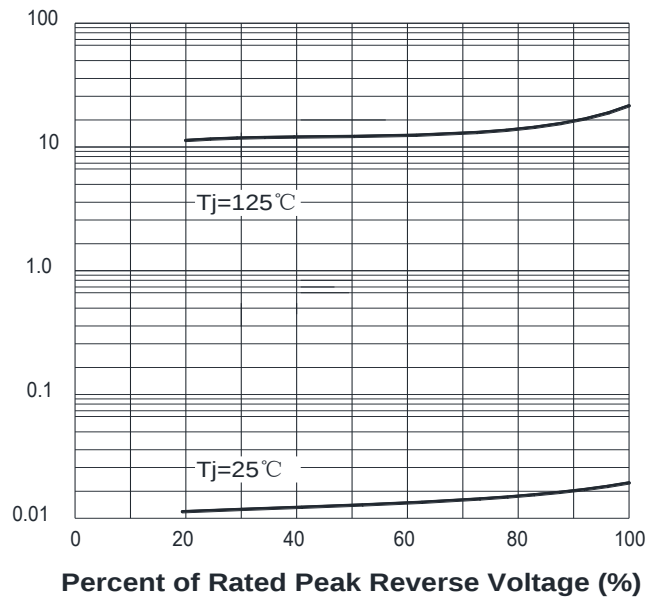
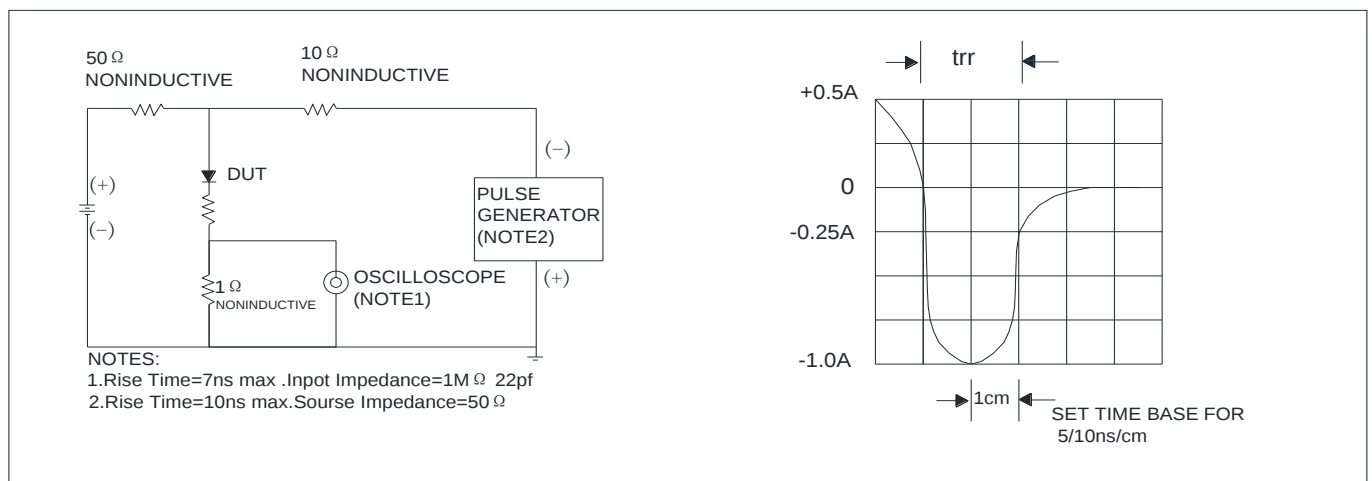


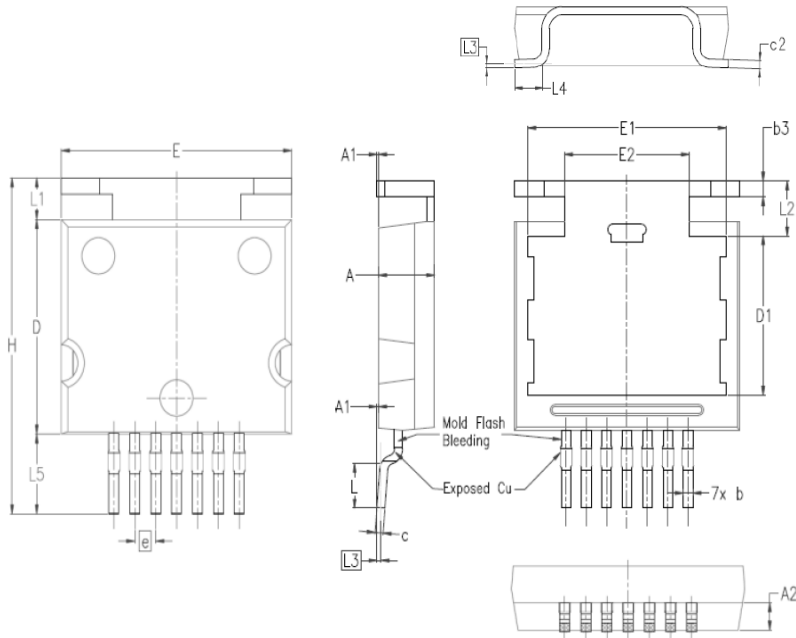
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





MUR6065KL

■ Outline Dimensions



T2PAK		
Dim	Min	Max
A	3.30	3.70
A1	---	0.25
A2	1.30	1.70
b	0.5	0.7
b3	0.8	1
c	0.4	0.6
c2	0.4	0.6
D	11.70	11.90
D1	8.80	9.20
E	13.60	14.40
E1	12.00	12.80
E2	7.60	8.00
e	1.27 BSC	
H	17.70	19.30
L	1.90	3.10
L1	2.30 REF	
L2	2.85	3.35
L3	0.25 BSC	
L4	1.25	2.45
L5	4.40REF	



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