

■ 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-247AC
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_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR3060P
Device marking code			MUR3060P
Repetitive Peak Reverse Voltage	V _{RRM}	V	600
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	300
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	373
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150
Junction capacitance @4V,1MHz	C _j	pF	195

■ ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max	
Instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =30.0A @T _j =25°C	-	1.45	1.6	
			I _{FM} =30.0A @T _j =150°C	-	1.25	1.45	
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	μA	V _{RM} =V _{RRM} T _j =25°C	-	-	10	
	I _{RRM2}		V _{RM} =V _{RRM} T _j =150°C	-	65	300	
Reverse Recovery Time	T _{rr}	ns	I _F =0.5A I _{RM} =1A I _{RR} =0.25A T _j =25°C	-	38	50	
Peak recovery current	I _{RRM}	A	T _j =25°C	-	5.49	-	
			T _j =125°C	-	13	-	
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	I _F =30A di/dt=-200A/μs V _{RM} =200V	-	309.52	-
			T _j =125°C		-	1165.74	-

■ **THERMAL CHARACTERISTICS** ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MUR3060P
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	1.0
	Between junction and Air	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	50

■ **CHARACTERISTICS (TYPICAL)**

FIG1: $I_o - T_c$ Curve

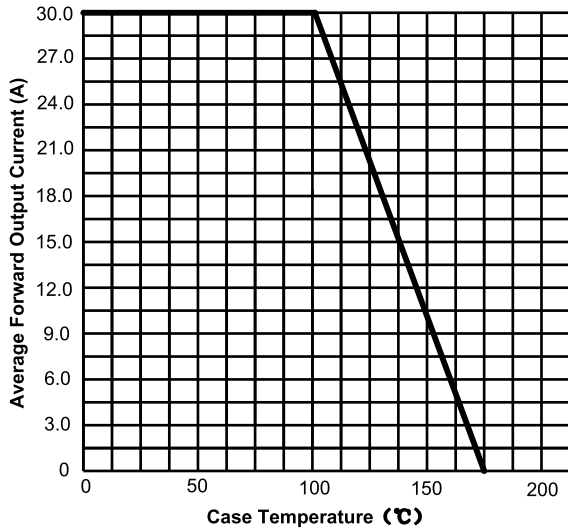


FIG2: Surge Forward Current Capability

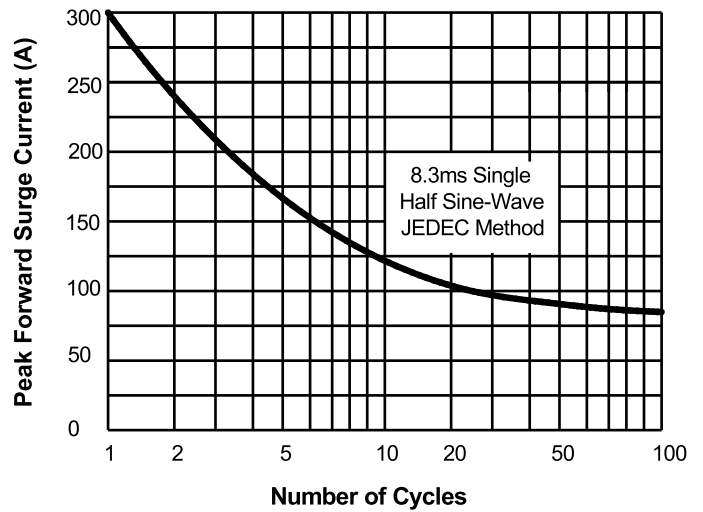


FIG3: Forward Voltage

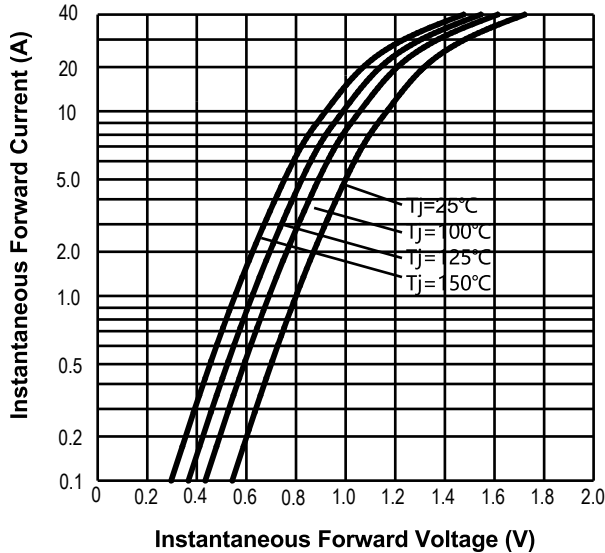


FIG4: Instantaneous Reverse Characteristics

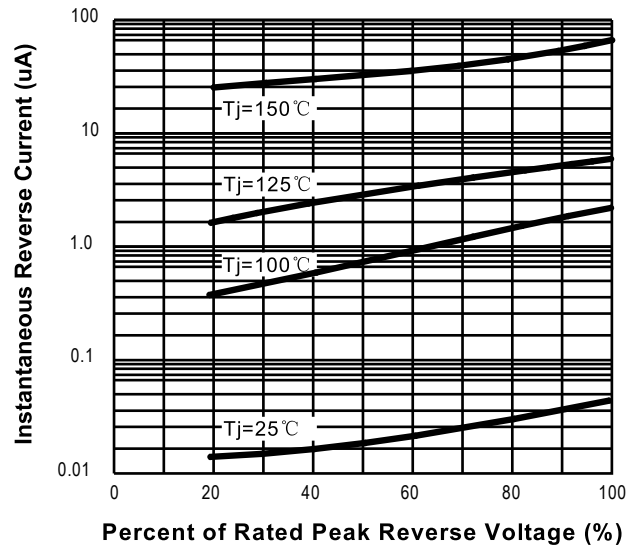


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

