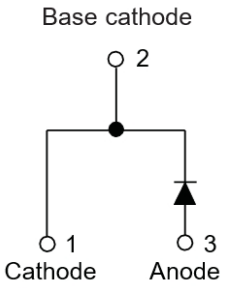
Ultra-Fast Recovery Rectifier Diodes





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
- Solder dip 275 °C max. 7 s, per JESD 22-B106

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 (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURL10060P
Device marking code			MURL10060P
Repetitive Peak Reverse Voltage	V_{RRM}	V	600
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc(FIG.1)	I_o	A	100
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	770
Current Squared Time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s.	2460
Storage Temperature	T_{stg}	℃	-55 ~ +175
Junction Temperature	T_j	℃	-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	548

■Electrical Characteristics（Tj=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=100.0A Tj=25℃		-	-	1.60
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	VRM=VRRM Tj=25℃		-	-	200
	I_{RRM2}	mA	VRM=VRRM Tj=150℃		-	-	5.0
Reverse Recovery Time	Trr	ns	I_F=0.5A I_{RM}=1A I_{RR}=0.25A Tj=25℃		-	67	75
			Tj=25℃	I_F=100A di/dt=-200A/us V_{RM}=400V	-	146	-
			Tj=125℃		-	245	-
Peak recovery current	I_{RRM}	A	Tj=25℃		-	9.41	-
			Tj=125℃		-	18.95	-
Reverse recovery charge	Qrr	nC	Tj=25℃		-	520	-
			Tj=125℃		-	2433	-

■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MURL10060P
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	0.3
	Between junction and Air	$R_{\theta J-A}$	℃/W	40

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURL10060P	Approximate 6.0	30	360	1800	Tube

■Characteristics (Typical)

FIG1:Io -Tc Curve

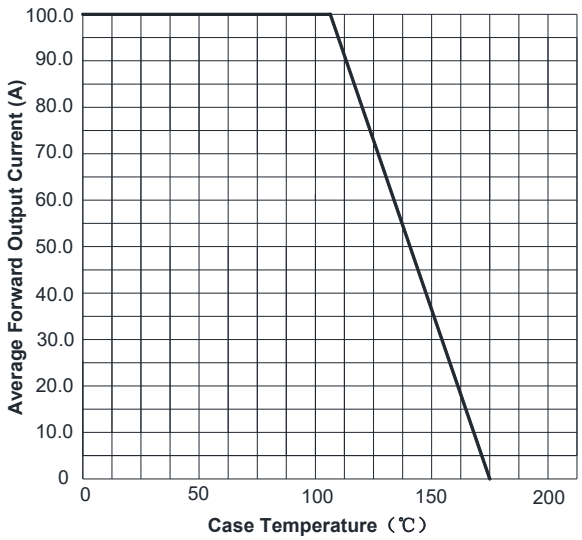


FIG2:Surge Forward Current Capability

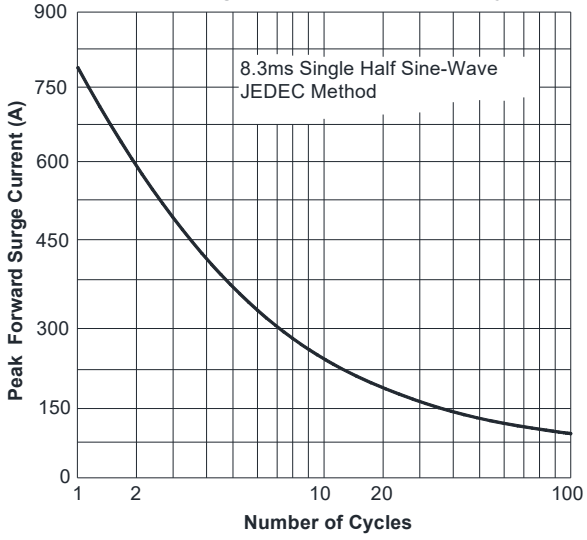


FIG3: Forward Voltage

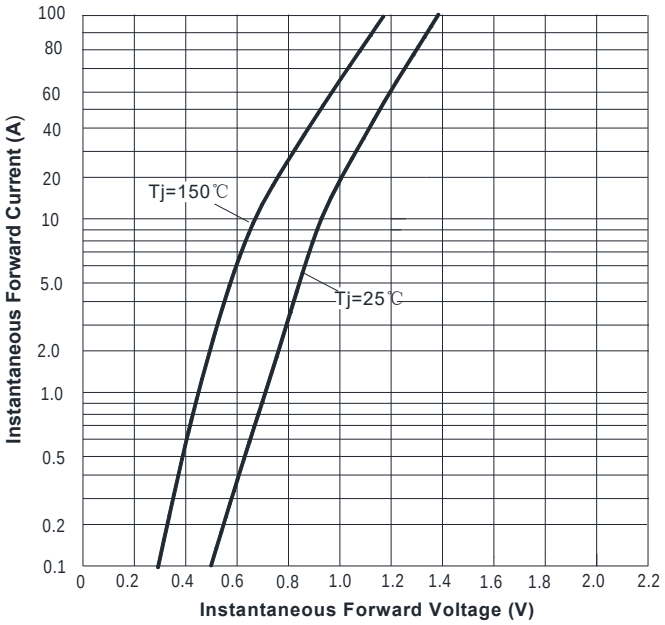


FIG4: Typical Reverse Characteristics

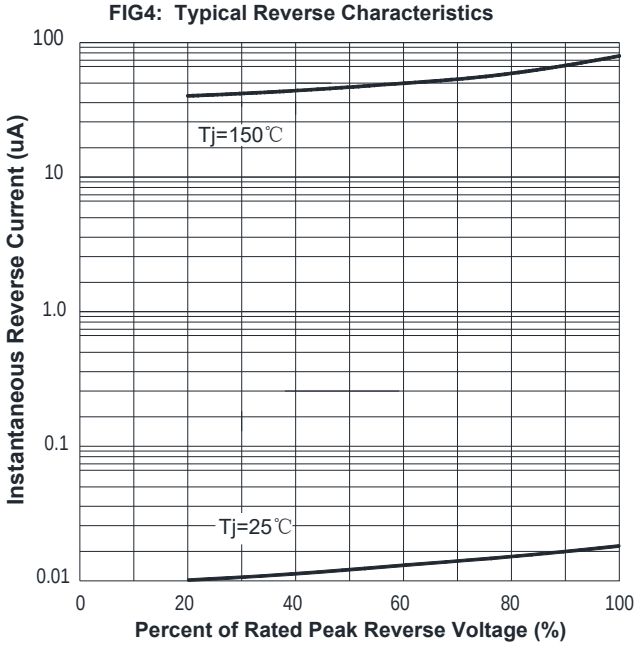
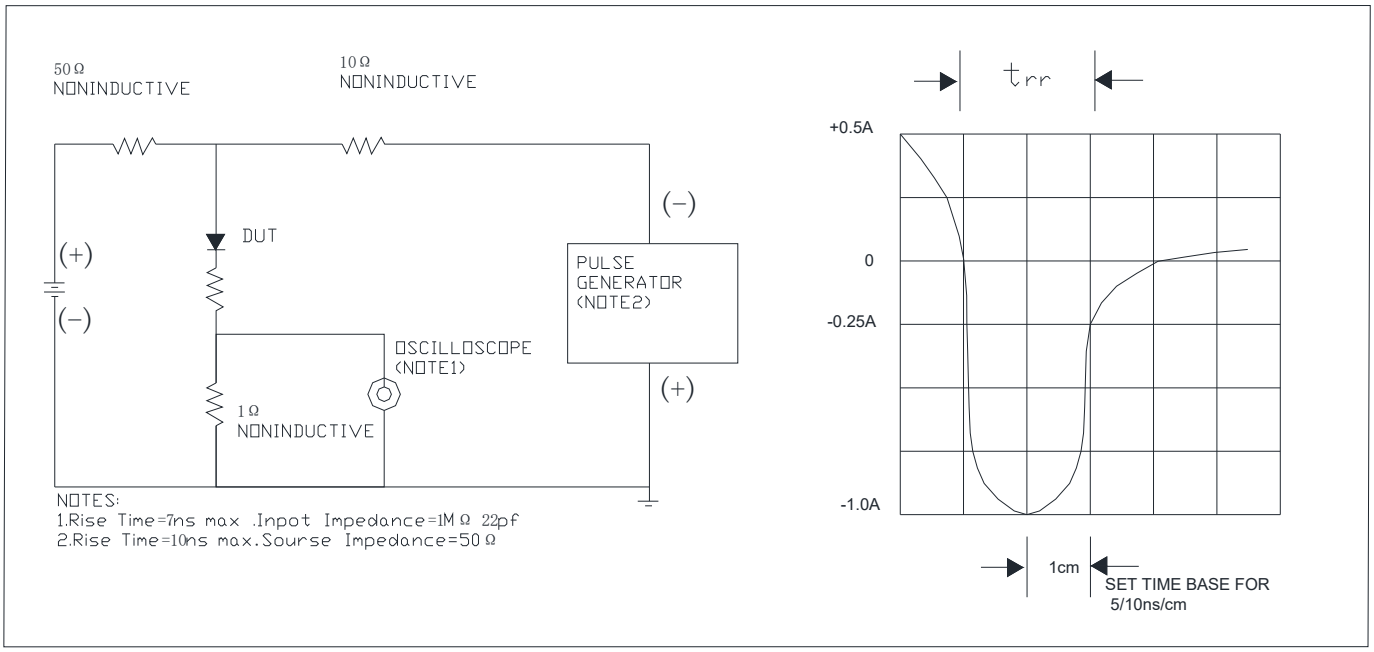


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



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