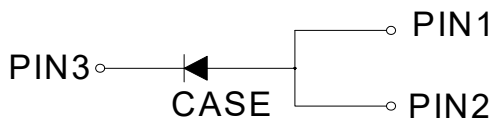
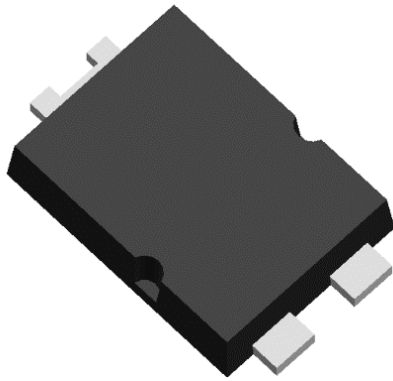


## Surface Mount Ultrafast Rectifier Diode



### Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

### Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

### Mechanical Data

- **Package:** TO-277  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	MUR6U60
Device marking code			MUR6U60
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	V	600
Maximum RMS Voltage	$V_{RMS}$	V	424
Maximum DC blocking Voltage	$V_{DC}$	V	600
Average Rectified Output Current @60Hz sine wave, Resistance load, $T_c$ (FIG.1)	$I_o$	A	6.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	$I_{FSM}$	A	80
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, $T_j=25^\circ\text{C}$			160
Current squared time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$	$I^2t$	$\text{A}^2\text{s}$	27
Typical Junction capacitance @4V, 1MHz	$C_j$	pF	42
Storage Temperature	$T_{stg}$	$^\circ\text{C}$	-55 ~ +175
Junction Temperature	$T_j$	$^\circ\text{C}$	-55 ~ +175



# MUR6U60

## ■ Electrical Characteristics (T<sub>j</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	T <sub>j</sub> =25°C	I <sub>FM</sub> =6.0A	-	1.93	2.20
			T <sub>j</sub> =125°C				
Reverse Recovery Time	T <sub>RR</sub>	ns	T <sub>j</sub> =25°C	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	-	22	35
DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	uA	T <sub>j</sub> =25°C	V <sub>RM</sub> =V <sub>RRM</sub>	-	-	5
	I <sub>RRM2</sub>		T <sub>j</sub> =125°C				500

## ■ Thermal Characteristics (T<sub>j</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR6U60
Typical Thermal resistance	R <sub>θJA</sub> <sup>(1)</sup>	°C/W	100
	R <sub>θJC</sub> <sup>(1)</sup>		15

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR6U60	F1	Approximate 0.0821	5000	/	80000	13" reel

## ■ Characteristics (Typical)

FIG.1: I<sub>o</sub>-T<sub>c</sub> Curve

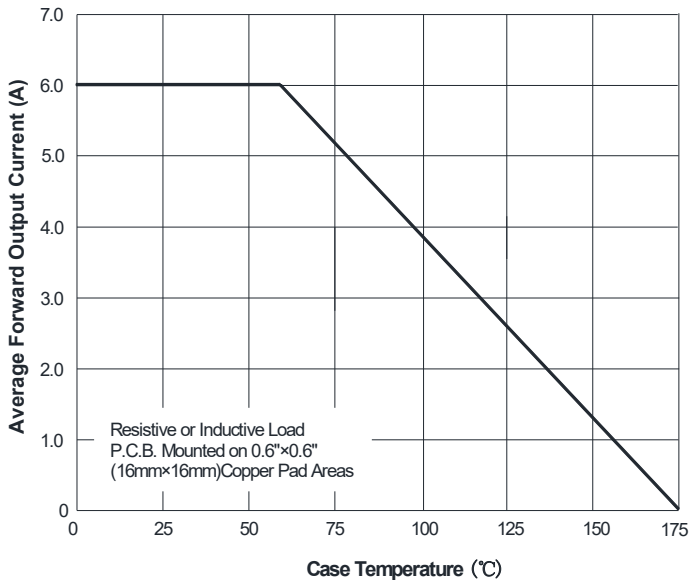


FIG.2: Forward Surge Current Capability

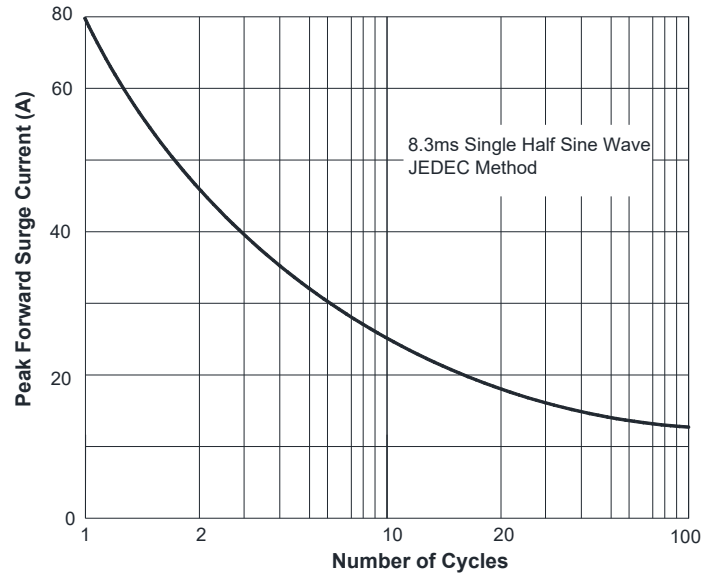


FIG.3: Forward Voltage

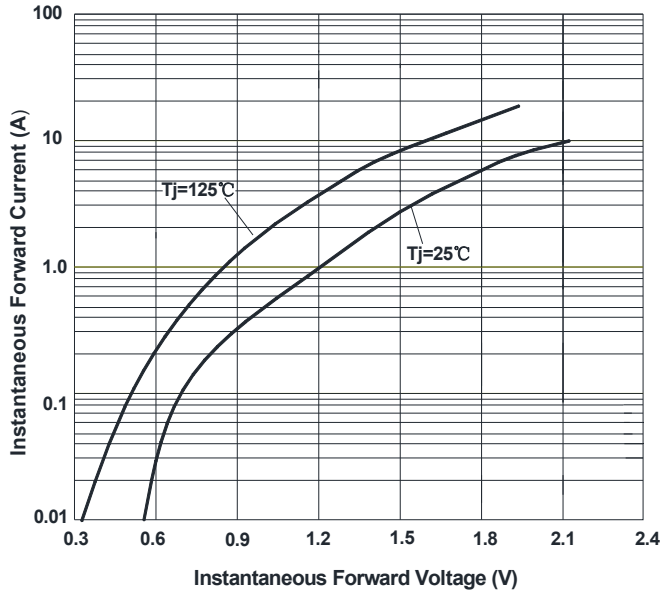
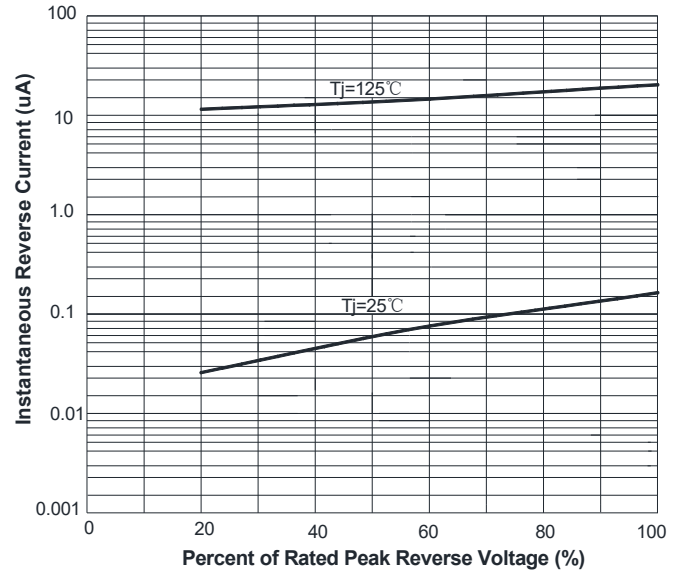
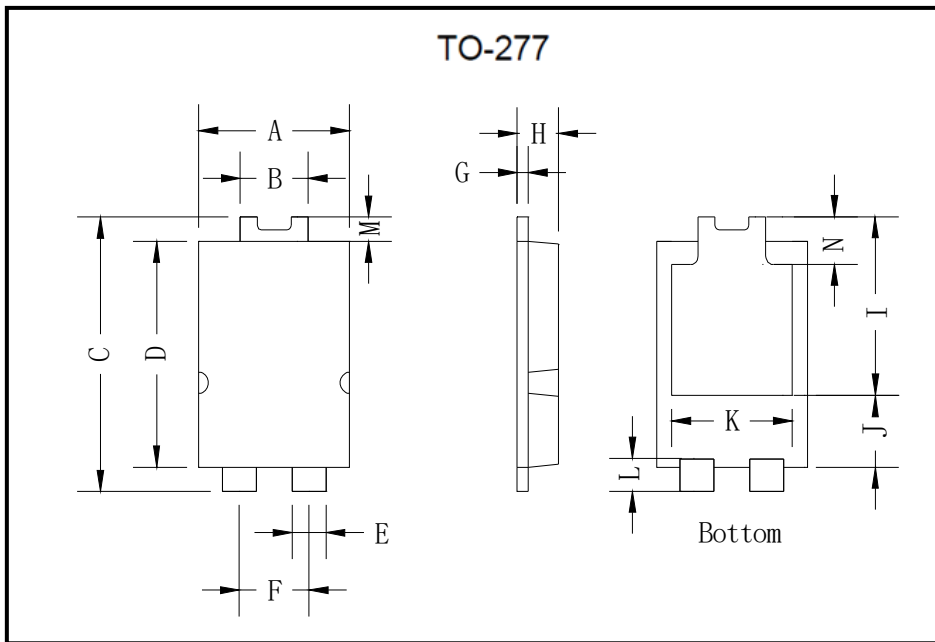


FIG.4: Typical Reverse Characteristics



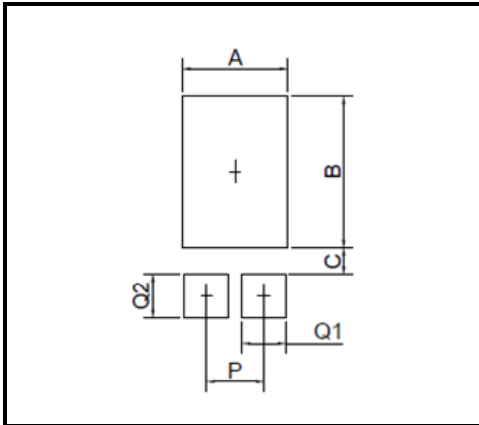
## ■ Outline Dimensions



TO-277		
Dim	Min(mm)	Max(mm)
A	3.90	4.10
B	1.70	1.90
C	6.40	6.60
D	5.30	5.50
E	0.80	1.00
F	1.85 ref.	
G	0.35	0.45
H	1.10	1.20
I	4.10	4.50
J	1.50	1.90
K	2.90	3.40
L	0.55	0.75
M	0.50 ref.	
N	1.15 ref.	



## ■ Suggested pad layout



DIM	MIN.(mm)
A	3.36
B	4.86
C	0.85
P	1.84
Q1	1.40
Q2	1.40



## MUR6U60

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