

## Features

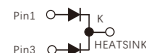
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ultrafast and soft recovery time for high efficiency
- Low VF, Low power loss
- Polyimide passivation
- High surge capability
- Meets JESD 201 class 2 whisker test
- High temperature soldering guaranteed: 260°C/10s at terminals
- Component in accordance to RoHS 2015/863/EU



TO-220AB



TO-263  
MUR4060D1



## Mechanical Data

- Case: JEDEC TO-220AB, TO-263
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked
- Mounting Torque: 10 in-lbs maximum

## Typical Applications

- For use in boost stage in SMPS
- High frequency inverters for solar inverters
- DC/DC converters
- High frequency output rectification of battery chargers
- Free wheeling diodes in motor drivers

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	2*20A
$V_{RRM}$	600V
$t_{rr}$	32ns
$V_f$ at $I_F=20.0A(125^\circ C)$	1.20V
$I_R$	5μA
$T_J(MAX)$	150°C
Diode variations	Common cathode

## Maximum Ratings

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	20.0	A
		40.0	
Surge non repetitive forward current $t_p=8.3ms$ sinusoidal, Per leg	$I_{FSM}$	200	A
Maximum operating junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-55 to +150	°C

## RATINGS AND CHARACTERISTICS OF MUR4060CT,MUR4060D1

### Electrical Characteristics (Per Leg, $T_j=25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	I <sub>R</sub> =100μA		V <sub>BR</sub> V <sub>R</sub>	600	-	-	V
Instaneous forward voltage	T <sub>J</sub> =25°C	I <sub>F</sub> =5.0A	V <sub>F</sub> <sup>1)</sup>	-	1.18	-	V
		I <sub>F</sub> =20.0A		-	1.50	1.70	
	T <sub>J</sub> =125°C	I <sub>F</sub> =5.0A		-	0.85	-	
		I <sub>F</sub> =20.0A		-	1.20	1.35	
Reverse current	T <sub>J</sub> =25°C	V <sub>R</sub> =600V	I <sub>R</sub> <sup>2)</sup>	-	-	5	μA
	T <sub>J</sub> =125°C			-	-	250	
Junction capacitance	4V,1MHz		C <sub>J</sub>	-	75	-	pF

Notes: 1.Pulse test: 300  $\mu\text{s}$  pulse width,1% duty cycle

2.Pulse test: pulse width  $\leq 40\text{ms}$

### Dynamic Recovery Characteristics (Per Leg, $T_j=25^\circ\text{C}$ Unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	$t_{rr}$	-	32	40	ns

## Thermal Characteristics

Parameter	Symbol	TO-220AB	TO-263	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta JC}$	0.8	0.8	°C/W

3.Thermal resistance from junction to case,Total device

## Availabale Pack Information

Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Tube Length (mm)	Inner Box Number	Tube Number Per A Inner Box	Part Number Per A Tube	Quantity(carton) (K)
MUR4060CT- TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
MUR4060D1- TO-263	Tube	565×225×170	548×151×37	538	5	20	50	5
Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Reel Diameter (mm)	Inner Box Number	Reel Number Per A Inner Box	Part Number Per A Reel	Quantity(carton) (K)
MUR4060D1- TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4

Fig.1-Forward Current Derating Curve

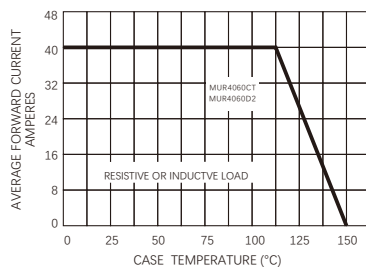


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

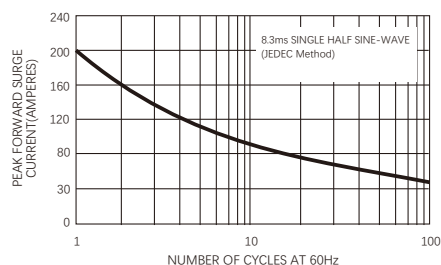


Fig.3-Typical Instantaneous Forward Characteristics

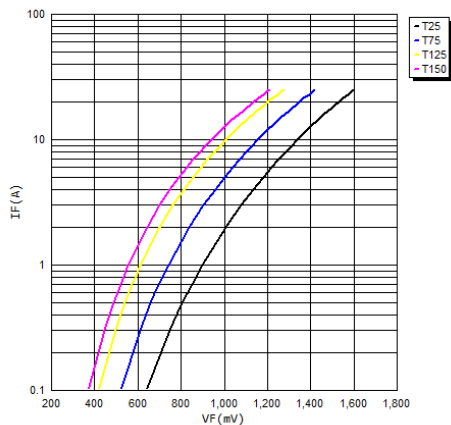


Fig.4-Typical Reverse Characteristics

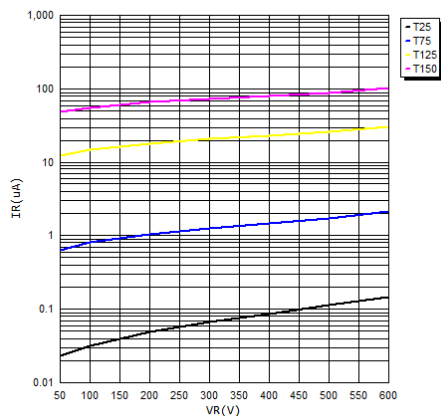
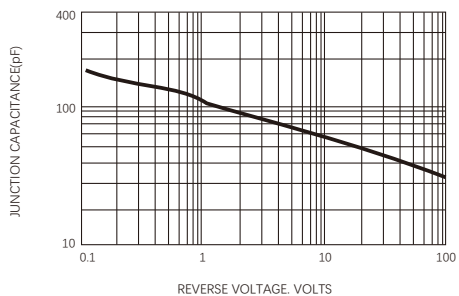
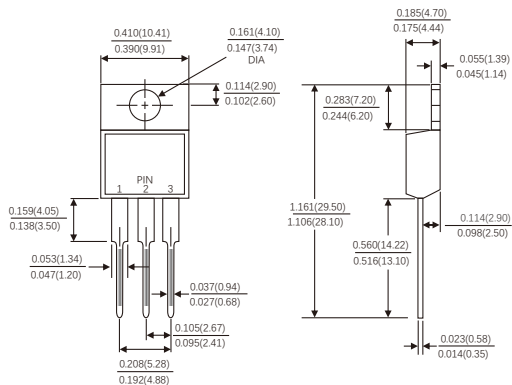


Fig.5-Typical Junction Capacitance

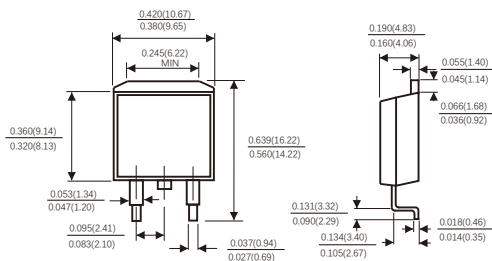


Dimensions in inches and (millimeters)

## TO-220AB

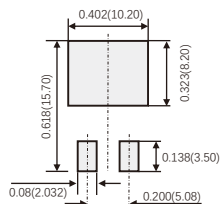


## TO-263



## Suggested Pad Layout

(TO-263)



(设计者可参考推荐值根据焊接工艺  
要求自行确定适合的焊盘尺寸)  
(Designers can refer to the recommended  
values according to the manufacturing process  
requirements to determine the appropriate pad size)

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