

TO-263

MUR6030D1

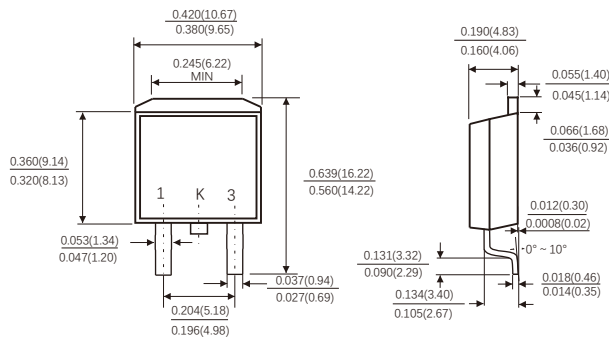
## FEATURES

- Fred Chip Planar Construction
- Super Fast Switching,High Efficiency
- Low Power loss, High Efficiency
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-0

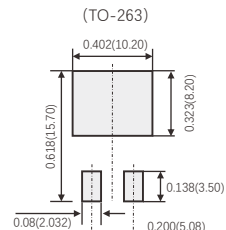


## MECHANICAL DATA

- Case: TO-263, Molded Plast
- Terminals:Pure tin Plated ,Lead free Solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position:Any



## Suggested Pad Layout



(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)

## TYPICAL APPLICATIONS

- For use in High Frequency Rectifier of Switching Mode Power Supplies, Freewheeling Diode, DC/DC Converters or polarity Protection Application

## MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	300	V
Maximum average forward rectified current, D=0.5, Square waveform, T <sub>c</sub> ≤ 125°C (see Fig.1)	Per leg	30.0	A
	Total device	60.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T <sub>J</sub> , Per leg)	I <sub>FSM</sub>	300	A
Operating junction temperature range	T <sub>J</sub>	-55 to +175	°C
Storage temperature range	T <sub>STG</sub>	-55 to +175	°C

# RATINGS AND CHARACTERISTIC OF MUR6030D1

## ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	I <sub>R</sub> =200μA		V <sub>BR</sub> V <sub>R</sub>	300	-	-	V
Instaneous forward voltage	T <sub>J</sub> =25°C	I <sub>F</sub> =30A Per Leg	V <sub>F</sub> <sup>1)</sup>	-	1.05	1.35	V
	T <sub>J</sub> =125°C			-	0.90	-	
Reverse current	T <sub>J</sub> =25°C	V <sub>R</sub> =300V	I <sub>R</sub> <sup>2)</sup>	-	-	5	μA
	T <sub>J</sub> =125°C			-	-	250	

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width ≤40ms

## DYNAMIC RECOVERY CHARACTERISTICS (T<sub>J</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	I <sub>F</sub> =0.5A,I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	-	35	45	ns

## THERMAL CHARACTERISTICS

Parameter	Symbol	TO-263	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJC</sub>	1.0	°C/W

3.Thermal resistance from junction to case,Total device

# RATINGS AND CHARACTERISTIC OF MUR6030D1

FIG.1-FORWARD CURRENT DERATING CURVE

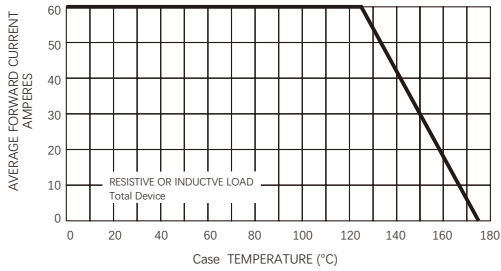


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

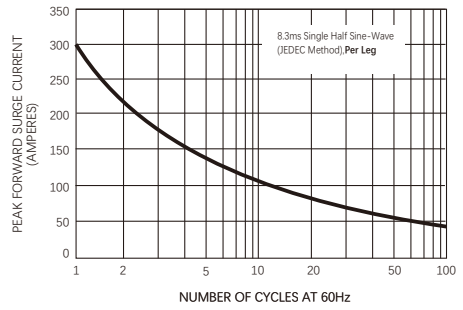


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

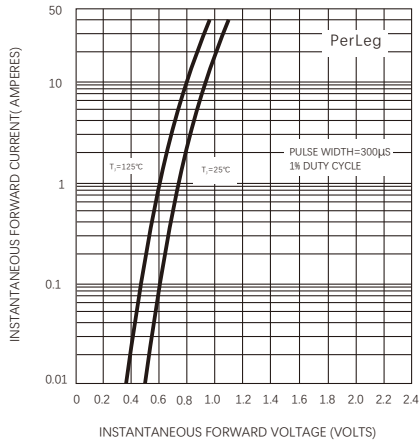


FIG.4-TYPICAL REVERSE CHARACTERISTICS

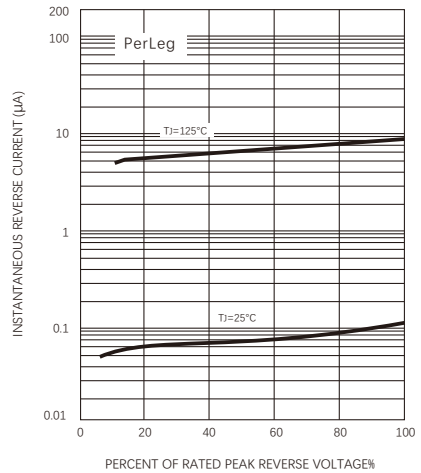


FIG.5-TYPICAL JUNCTION CAPACITANCE

