SEMICONDUCTOR

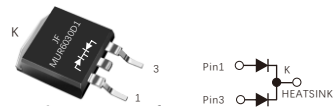
MUR6030D1

POLYIMIDE PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 300 Volts
Forward Current - 60.0Amperes

TO-263

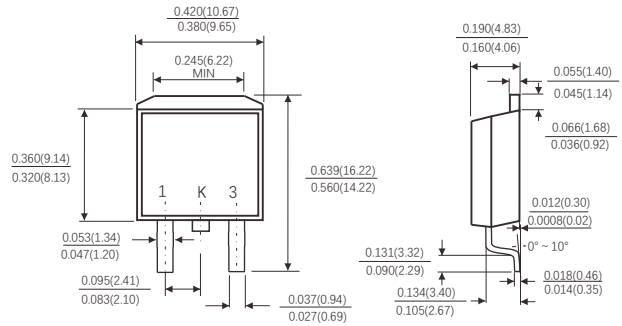
MUR6030LD1



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

RoHS COMPLIANT



MECHANICAL DATA

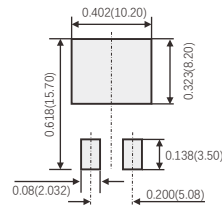
- Case: TO-263, Molded Plast
- Terminals:Pure tin Plated ,Lead free Solderable per MIL-STD-750, Method 2026
- Polarity: As marked
- Mounting Position:Any

TYPICAL APPLICATIONS

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

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)

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter		Symbol	Value	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	300	V
Maximum average forward rectified current,D=0.5, Square waveform,Tc≤125℃ (see Fig.1)	Per leg	$I_{F(AV)}$	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_L,Per leg)		I_{FSM}	300	A
Operating junction temperature range		T_J	-55 to+175	℃
Storage temperature range		T_{stg}	-55 to+175	℃

RATINGS AND CHARACTERISTIC OF MUR6030D1

ELECTRICAL CHARACTERISTCS (TJ=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200μA		V_{BR} V_R	300	-	-	V
Instaneous forward voltage	TJ=25℃	I_F=30A Per Leg	V_F 1)	-	1.05	1.35	V
	TJ=125℃			-	0.90	-	
Reverse current	TJ=25℃	V_R=300V	I_R 2)	-	-	5	μA
	TJ=125℃			-	-	250	

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

2.Pulse test: pulse width≤40ms

DYNAMIC RECOVERY CHARACTERISTCS (TJ=25℃ Unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	IF=0.5A,IR=1.0A, Irr=0.25A	trr	-	35	45	ns

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-263	Unit
Typical thermal resistance 3)	$R_{\theta JC}$	1.0	℃/W

3.Thermal resistance from junction to case,Total device

RATINGS AND CHARACTERISTIC OF MUR6030D1

FIG.1-FORWARD CURRENT DERATING CURVE

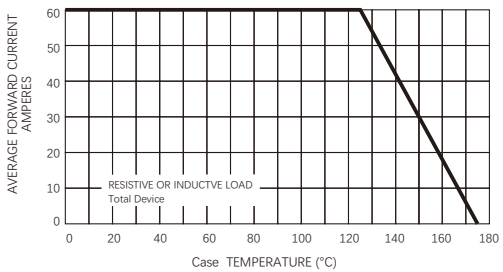


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

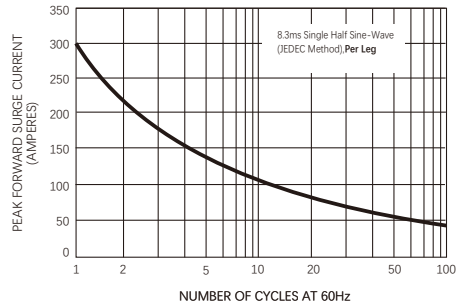


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

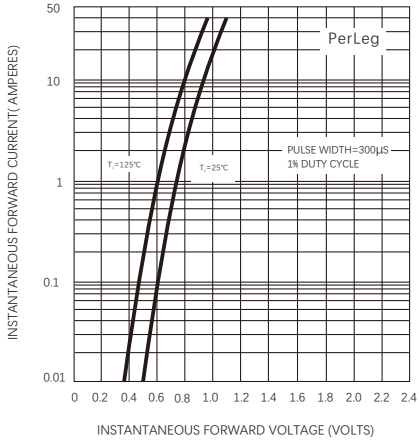


FIG.4-TYPICAL REVERSE CHARACTERISTICS

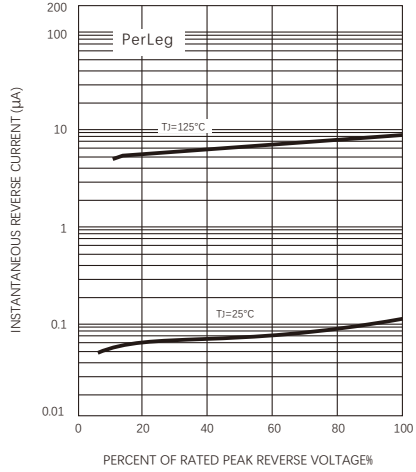


FIG.5-TYPICAL JUNCTION CAPACITANCE