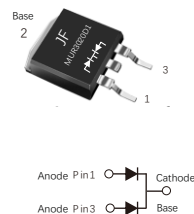


## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2015/863/EU

## TO-263(D<sup>2</sup>PAK)



## MECHANICAL DATA

- Case: JEDEC TO-263(D<sup>2</sup>PAK) molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°Cambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameter		Symbols	MUR 3020D1	MUR 3040D1	MUR 3060D1	Units
Maximum repetitive peak reverse voltage		V <sub>RRM</sub>	200	400	600	Volts
Maximum RMS voltage		V <sub>RMS</sub>	140	280	420	Volts
Maximum DC blocking voltage		V <sub>DC</sub>	200	400	600	Volts
Maximum average forward rectified current(see Fig.1)	Per leg	I <sub>F(AV)</sub>	15.0 30.0			Amps
	Total device					
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I <sub>FSM</sub>	220			Amps
Maximum instantaneous forward voltage at 15.0 A per leg(Note 1 )		V <sub>F</sub>	1.05	1.30	1.7	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T <sub>J</sub> =25℃	I <sub>R</sub>	5			μA
	T <sub>J</sub> =125℃		50			
Maximum Reverse Recovery Time (Note 2)		t <sub>rr</sub>	35			ns
Typical thermal resistance (Note 3)		R <sub>θJC</sub>	2.0			℃/W
Operating junction temperature range		T <sub>J</sub>	-55 to+150			℃
Storage temperature range		T <sub>STG</sub>	-55 to+150			℃

Notes: 1. Pulse test: 300us pulse width,1% duty cycle  
2. Reverse recovery test conditions  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
3. Thermal resistance from junction to case, Per diode

## RATINGS AND CHARACTERISTIC CURVES MURF3020D1 THRU MURF3060D1

FIG.1-FORWARD CURRENT DERATING CURVE

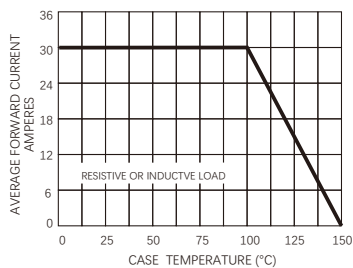


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

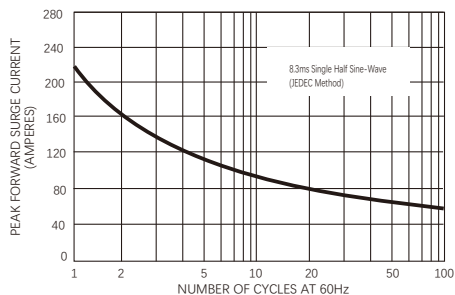


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

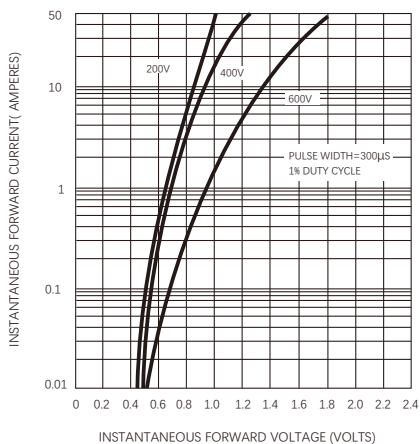
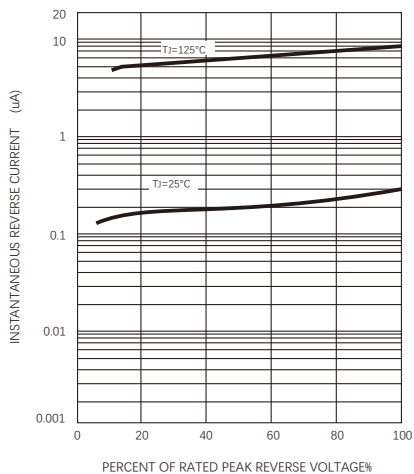
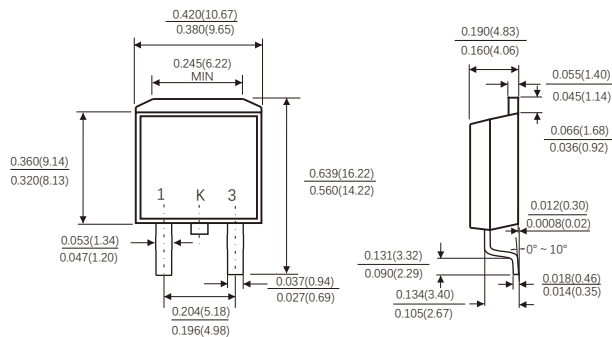


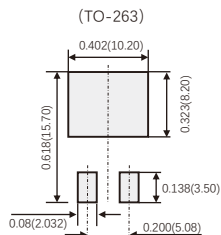
FIG.4-TYPICAL REVERSE CHARACTERISTICS



## TO-263



## 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)

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