SEMICONDUCTOR

MUR3030 MURF3030 MUR3030D2

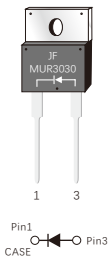
POLYIMIDE PASSIVATED SUPER FAST RECTIFIER
Reverse Voltage - 300 Volts
Forward Current - 30.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fred Chip Planar Construction
- Low forward voltage drop
- Ultrafast Recovery Time
- Soft Recovery Characteristics
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2015/863/EU

TO-220AC

MUR3030



ITO-220AC

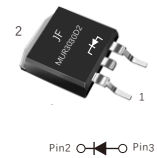
MURF3030

MECHANICAL D ATA

- Case: TO-220AC 、ITO-220AC、TO-263 molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

TO-263

MUR3030D2



TYPICAL APPLICATIONS

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

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	$I_{F(AV)}$	30.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	300	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

ELECTRICAL CHARACTERISTCS (TJ=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200μA		VBR VR	300	-	-	V
Instaneous forward voltage	TJ=25℃	IF=30A	VF 1)	-	1.10	1.25	V
	TJ=125℃			-	1.00	-	
Reverse current	TJ=25℃	VR= 300V	IR 2)	-	-	5	μA
	TJ=125℃			-	-	50	

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	-	30	50	ns

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-220AC	ITO-220AC	TO-263	Unit
Typical thermal resistance 3)	RθJC	1.3	3.2	1.3	℃/W

3.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES MUR3030\MURF3030\MUR3030D2

FIG.1-FORWARD CURRENT DERATING CURVE

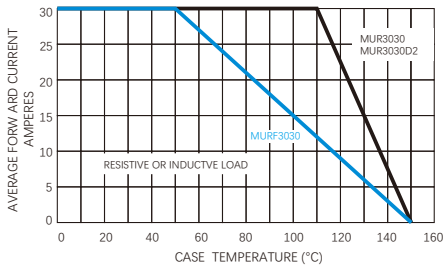


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

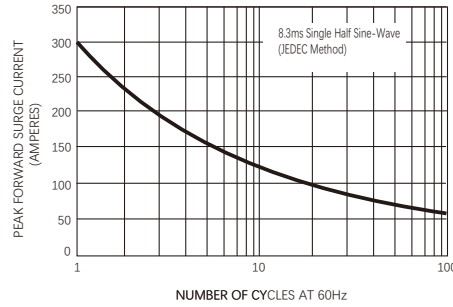


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

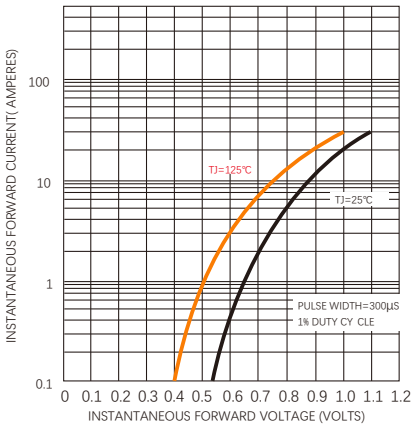
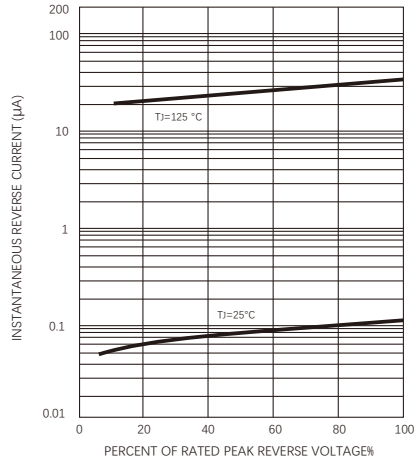
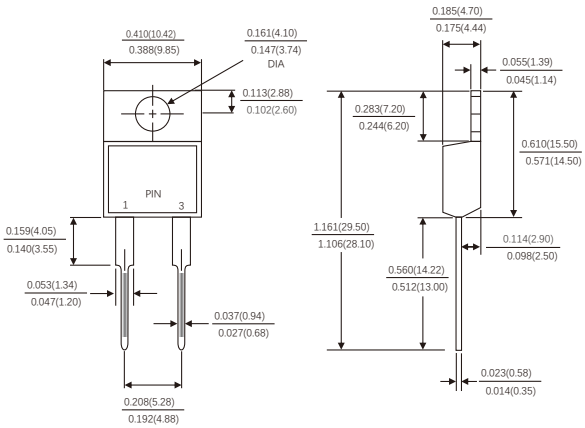


FIG.4-TYPICAL REVERSE CHARACTERISTICS

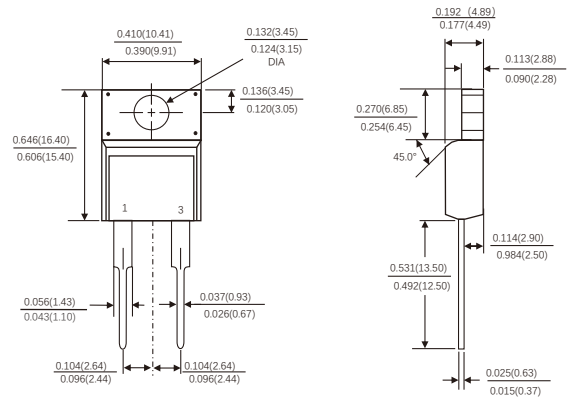


Dimensions in inches and (millimeters)

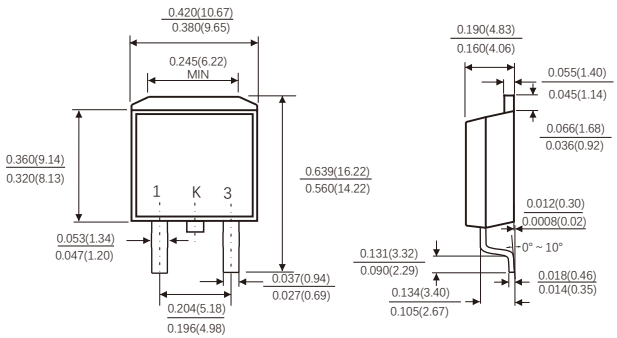
TO-220AC



ITO-220AC

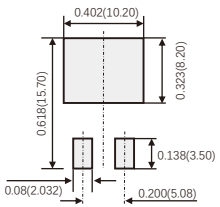


TO-263



Suggested Pad Layout

(TO-263)



（对于TO263，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）
(For TO-263，Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

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