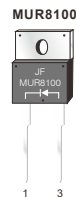


Features

- 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/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



TO-220AC

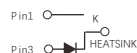


ITO-220AC



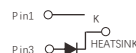
TO-263 (D²PAK)

MUR8100D2



TO-252(DPAK)

MUR8100M2



Mechanical Data

- Case: JEDEC TO-220AC ITO-220AC TO-263(D²PAK) TO-252(DPAK) molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

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)}	8.0A
V _R	1000V
I _{FSM}	80A
V _F at I _F =8.0A,125°C	1.60V
T _{rr typ}	42ns
T _{JMAX}	175°C

Maximum Ratings

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	1000	V
Maximum average forward rectified current	I _{F(AV)}	8.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T _J)	I _{FSM}	80	A
Operating junction temperature range	T _J	-55 to+175	°C
Storage temperature range	T _{stg}	-55 to+175	°C

Electrical Characteristics (T_J=25°C Unless Otherwise Noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200μA		V _{BR} V _R	1000	-	-	V
Instaneous forward voltage	T _J =25°C	IF=1.0A	V _F ¹⁾	-	1.20	-	V
		IF=3.0A		-	1.50	-	
		IF=8.0A		-	1.90	2.35	
	T _J =125°C	IF=1.0A		-	0.91	-	
		IF=3.0A		-	1.20	-	
		IF=8.0A		-	1.60	-	
Reverse current	T _J =25°C	VR=1000V	I _R ²⁾	-	0.1	5	μ A
	T _J =100°C			-	1.0	-	μ A
	T _J =125°C			-	5	-	
Junction capacitance	4V,1MHz		C _J	-	24	-	pF

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

2.Pulse test: pulse width≤40ms

Dynamic Recovery Characteristics (T_J=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	IF=1.0A,dI _F /dt=100A/μs,V _R =30V		trr		42		ns
	T _J =25°C	IF=8A dI _F /dt=100A/μS V _R =390V			150		
	T _J =125°C				200		
Peak recovery current	T _J =25°C		IF=8A dI _F /dt=100A/μS V _R =390V	I _{RRM}		3	
	T _J =125°C				5		
Reverse recovery charge	T _J =25°C	IF=8A dI _F /dt=100A/μS V _R =390V	Q _{rr}		370		nc
	T _J =125°C				745		

Thermal Characteristics

Parameter	Symbol	TO-220AC TO-263 TO-252	ITO-220AC	Unit
Typical thermal resistance ³⁾	R _{θjc}	2.5	4.5	°C/W

3.Thermal resistance from junction to case

Available 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)
MUR8100- TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
MURF8100- ITO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
MUR8100D2- TO-263	Tube	565×225×170	548×151×37	538	5	20	50	5
MUR8100M2- TO-252	Tube	565×225×170	548×151×37	520	5	60	75	22.5
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)
MUR8100D2- TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4
MUR8100M2- TO-252	Reel	364×364×235	346×346×23	φ330	8	1	2500	20

Fig.1-Forward Current Derating Curve

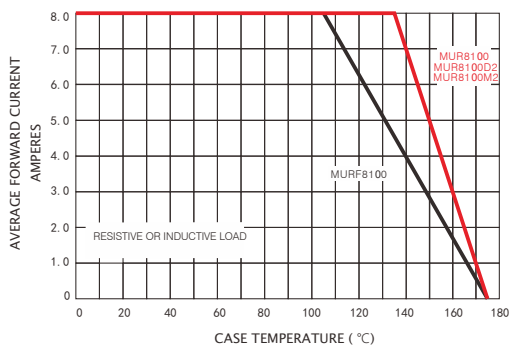


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

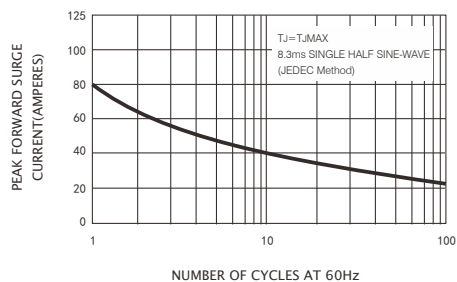


Fig.3-Typical Instantaneous Forward Characteristics

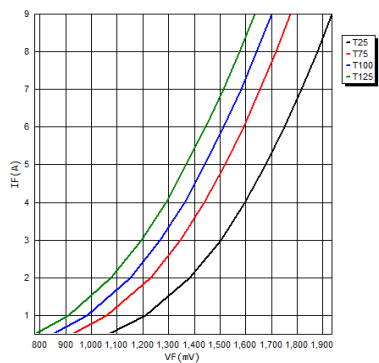


Fig.4-Typical Reverse Characteristics

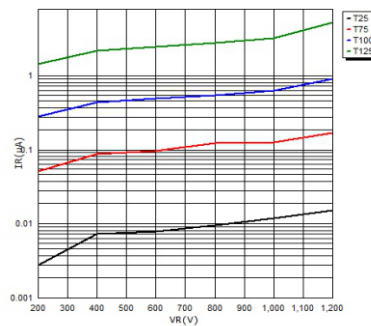
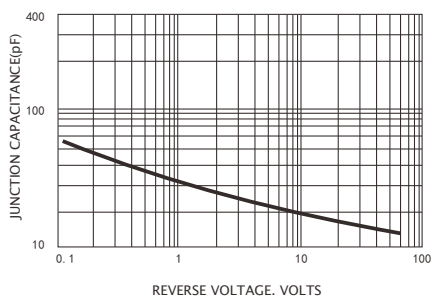
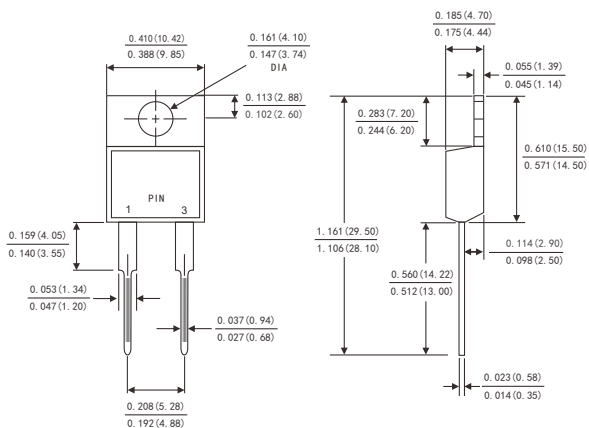


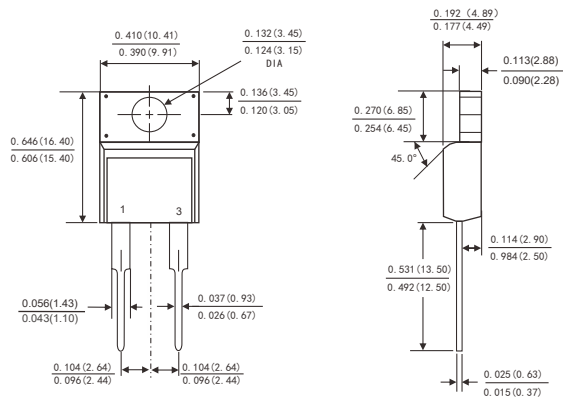
Fig.5-Typical Junction Capacitance



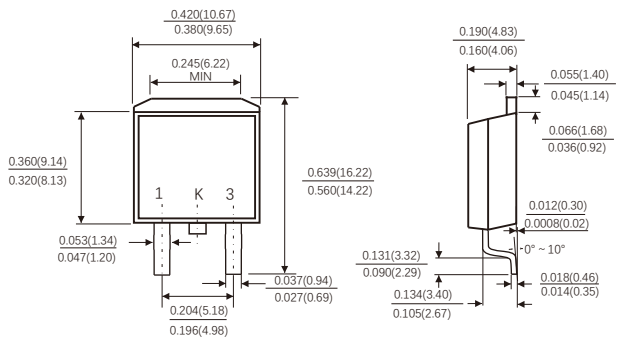
TO-220AC



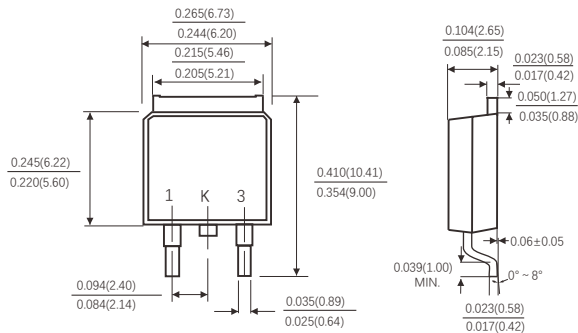
ITO-220AC



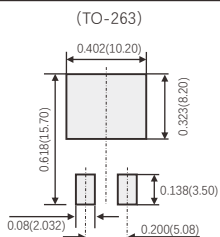
TO-263



TO-252

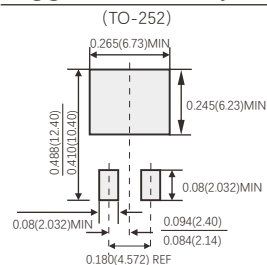


Suggested Pad Layout



(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)

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)

Dimensions in inches and (millimeters)

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