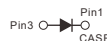
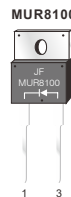


Features

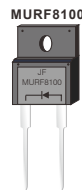
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ultrafast and soft recovery time for high efficiency
- Low VF ,Low power loss
- Polyimide passivation
- High surge capability
- Meets JESD 201 class 2 whisker test
- High temperature soldering guaranteed:260 /10 seconds at terminals
- Component in accordance to RoHS 2015 863 EU



TO-220AC

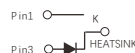


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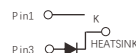
TO-263 D²PAK

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

Maximum Ratings

(Ratings at 25 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	
Storage temperature range	T _{stg}	-55 to+175	

Electrical Characteristics T_j 25 Unless Otherwise Noted

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200 μ A		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 Unless otherwise noted

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

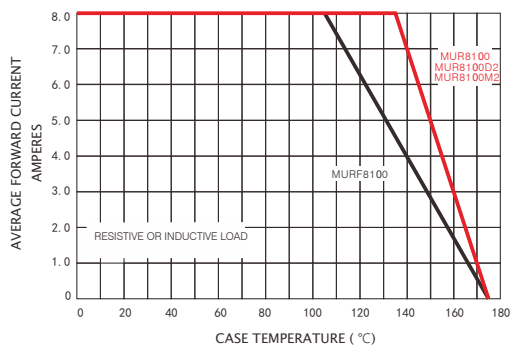


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

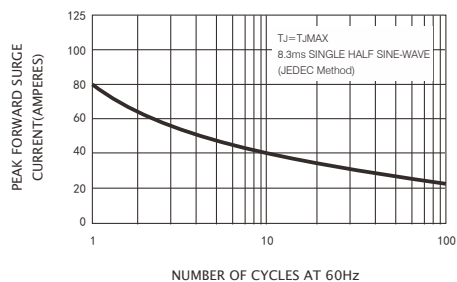


Fig.3-Typical Instantaneous Forward Characteristics

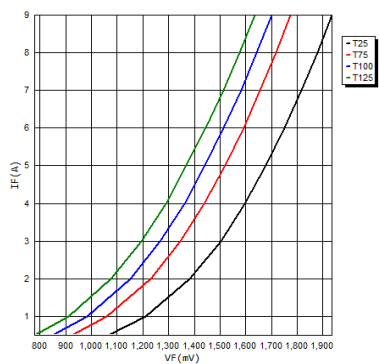


Fig.4-Typical Reverse Characteristics

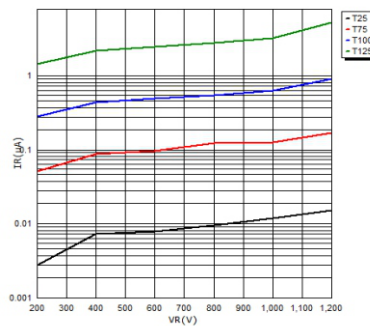
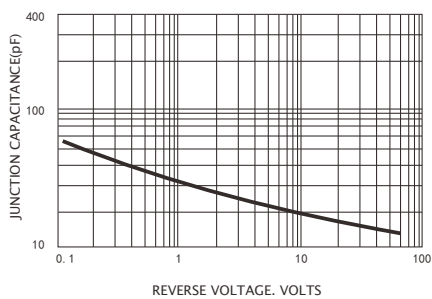
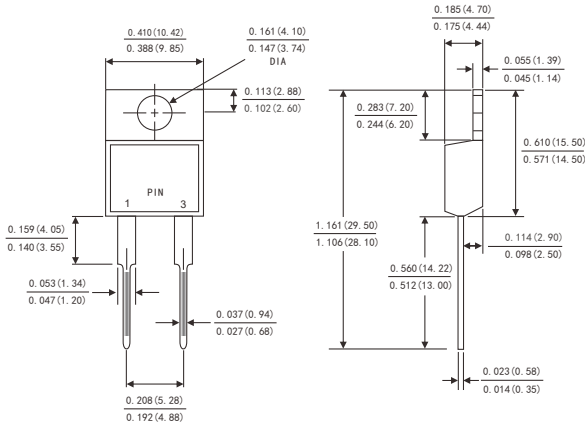


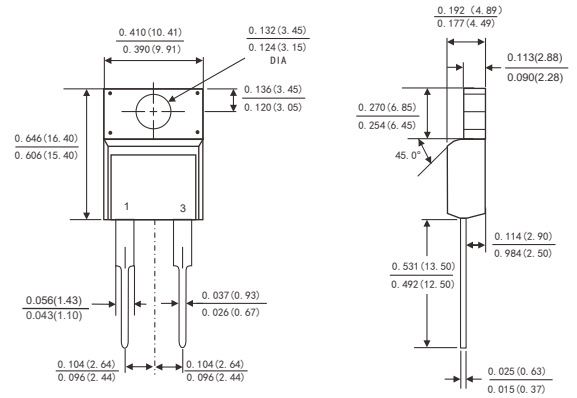
Fig.5-Typical Junction Capacitance



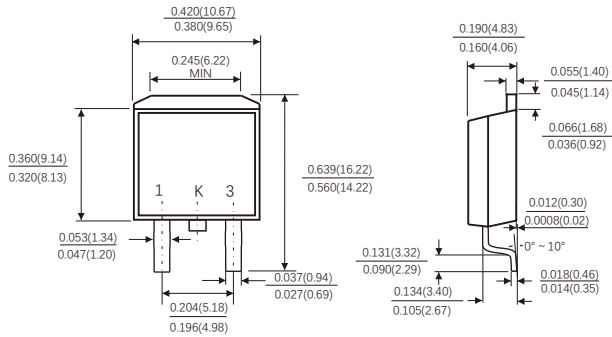
TO-220AC



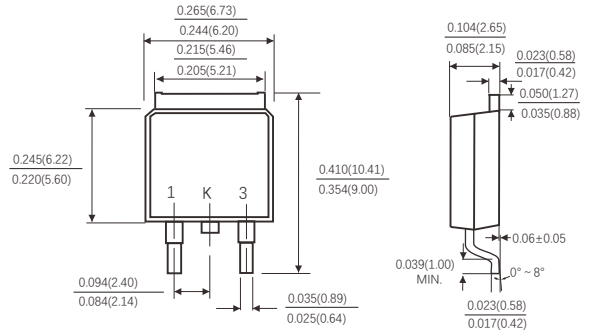
ITO-220AC



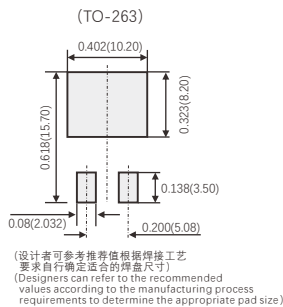
TO-263



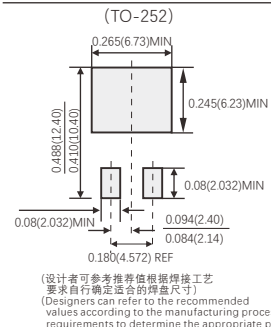
TO-252



Suggested Pad Layout



Suggested Pad Layout



Dimensions in inches and (millimeters)

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