

FEATURES

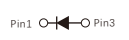
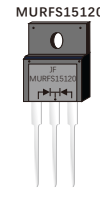
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ultrafast and soft recovery time for high efficiency
- Low VF ,Low power loss
- Polyimide passivation
- High surge capability
- Meets JESD 201 class 2 whisker test
- High temperature soldering guaranteed:260°C/10 seconds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



TO-220AC



ITO-220AC



TO-263

MURS15120D2



MECHANICAL DATA

- Case: JEDEC TO-220AC ITO-220AC TO-263 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

$I_F(AV)$	15.0A
V_R	1200V
I_{FSM}	150A
V_F at $I_F=15.0A, 125^\circ C$	2.0V
$T_{rr typ}$	35ns
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}	1200	V
Maximum average forward rectified current	$I_F(AV)$	15.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_J)	I_{FSM}	150	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	I _R =200μA		V _{BR} V _R	1200	-	-	V
Instaneous forward voltage	T _J =25°C	I _F =15.0A	V _F ¹⁾	-	2.7	3.3	V
	T _J =125°C	I _F =15.0A		-	2.0	2.6	
Reverse current	T _J =25°C	V _R =1200V	I _R ²⁾	-	5	60	μA
	T _J =150°C			-	50	200	
Junction capacitance	4V,1MHz		C _J	-	64	-	pF

Notes: 1.Pulse test: 300 μs 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	I _F =0.5A,I _R =1.0A, I _{rr} =0.25A	t _{rr}	-	35	50	ns

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-220AC TO-263	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)
MURS15120- TO-220AC	Tube	565×225×170	548×151×37	540	5	20	50	5
MURFS15120- ITO-220AC	Tube	565×225×170	548×151×37	540	5	20	50	5
MURS15120D2- TO-263	Tube	565×225×170	548×151×37	538	5	20	50	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)
MURS15120D2- TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4

FIG.1-FORWARD CURRENT DERATING CURVE

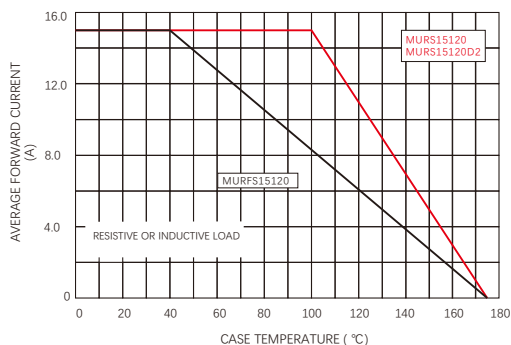


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

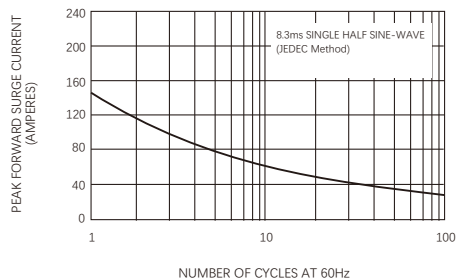


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

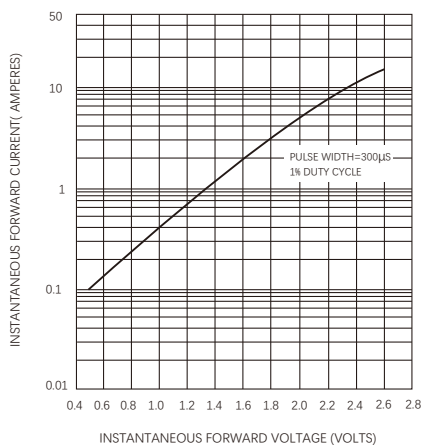


FIG.4-TYPICAL REVERSE CHARACTERISTICS

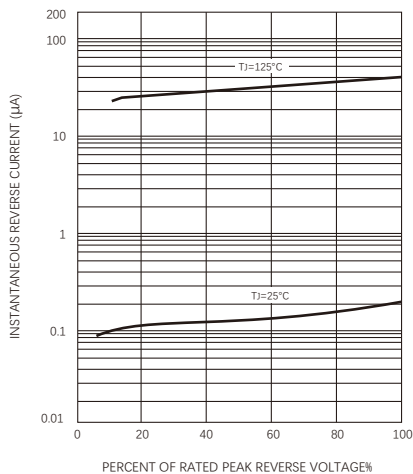
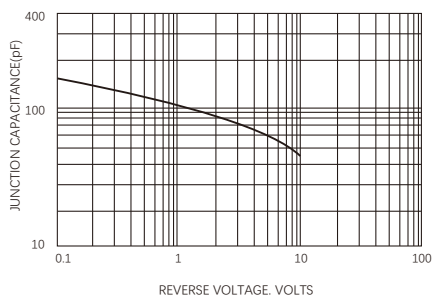
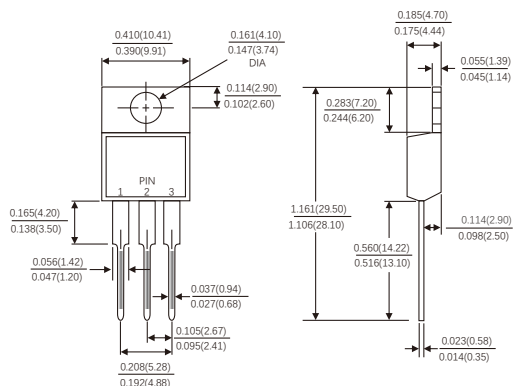


FIG.5-TYPICAL JUNCTION CAPACITANCE

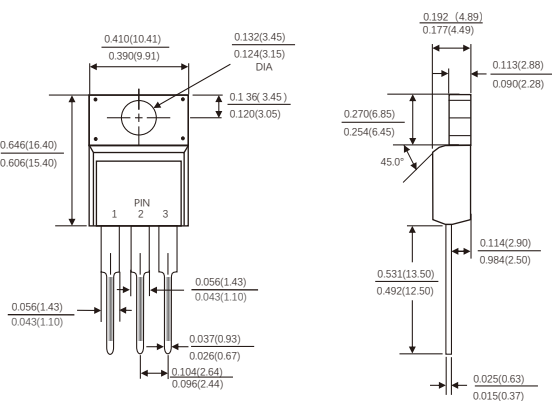


Dimensions in inches and (millimeters)

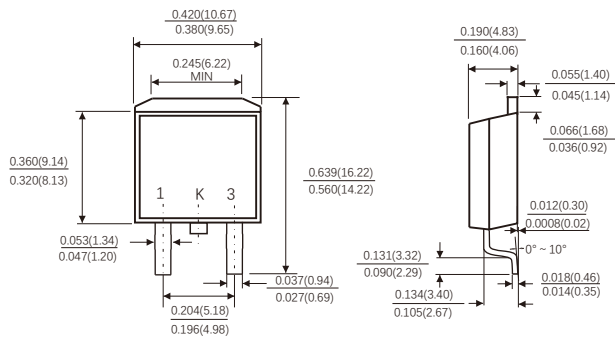
TO-220AB



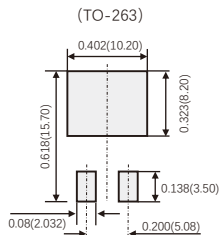
ITO-220AB



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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