

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-247AC
MUR30120P



Pin1 CASE ← Pin3

Mechanical Data

- Case: JEDEC TO-247AC 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	
IF(AV)	30.0A
VR	1200V
IFSM	300A
VF at IF=30.0A,125°C	1.50V
Trr typ	60ns
TJMAX	175°C

Maximum Ratings

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	VRRM	1200	V
Maximum average forward rectified current	IF(AV)	30.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated Tj)	IFSM	300	A
Operating junction temperature range	Tj	-55 to+175	°C
Storage temperature range	Tsto	-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 _r =15.0A	V _F ¹⁾	-	1.40	-	V
		I _r =30.0A		-	1.90	2.40	
	T _J =125°C	I _r =15.0A		-	1.20	-	
		I _r =30.0A		-	1.50	2.00	
Reverse current	T _J =25°C	V _r =1200V	I _R ²⁾	-	-	10	μA
	T _J =125°C			-	-	250	
Junction capacitance	4V,1MHz		C _j	-	124	-	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}	-	60	70	ns

Thermal Characteristics

Parameter	Symbol	TO-247AC	Unit
Typical thermal resistance ³⁾	$R\theta_{jc}$	0.4	$^{\circ}\text{C}/\text{W}$

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)
MUR30120P- TO-247AC	Tube	575×220×170	560×145×40	500	5	12	30	1.8

Fig.1-Forward Current Derating Curve

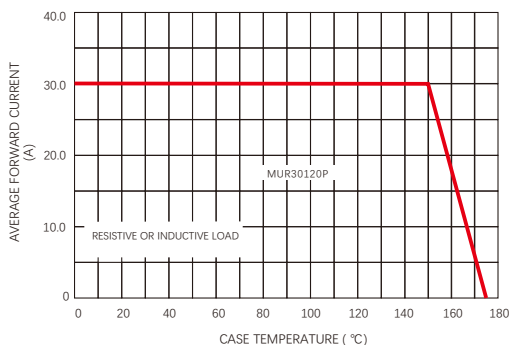


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

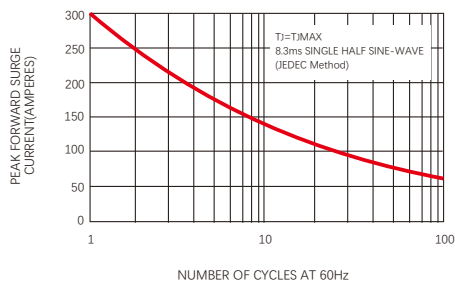


Fig.3-Typical Instantaneous Forward Characteristics

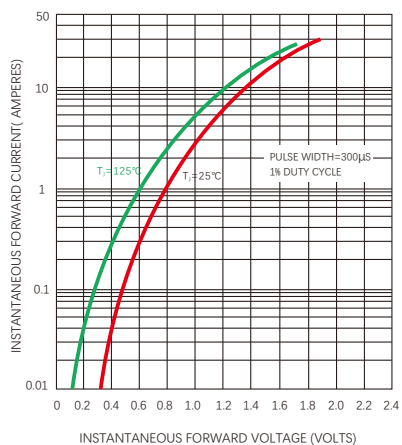


Fig.4-Typical Reverse Characteristics

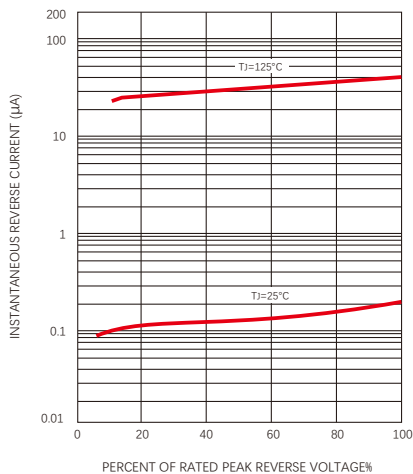
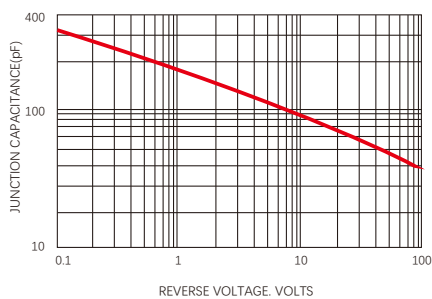
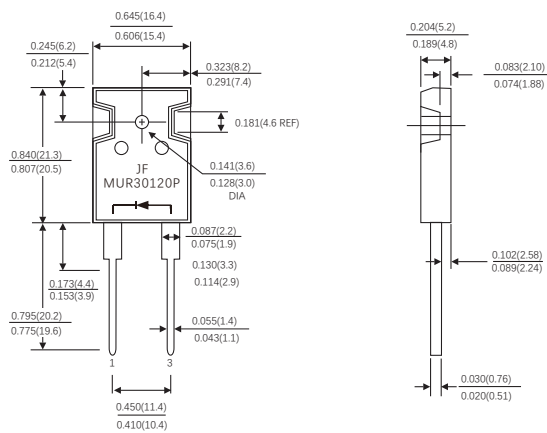


Fig.5-Typical Junction Capacitance



TO-247AC



Dimensions in inches and (millimeters)

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