

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
- AEC-Q101 qualified and PPAP capable
- ESD Ratings:MM=C(>400V);HBM=3B(>8KV)
- High temperature soldering guaranteed:260℃/10s at terminals
- Component in accordance to RoHS 2011/65/EU

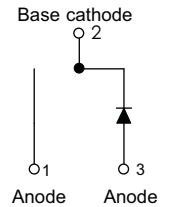


AEC-Q101 Qualified

MECHANICAL DATA

- Case: JEDEC TO-263 molded plastic body
- Terminals: Lead solderable per MIL-STD-750.method 2026
- Polarity: As marked
- Mounting Position: Any
- weight: 2.24g(Approx.)

TO-263
MUR1560D2-V



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

CASE:TO-263
Marking:
JF=Logo
Y=Year
W=Work Week
S=Component Code
MUR1560D2-V=Device Code
V=For Automobile

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	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,Total device)	I_{FSM}	150	A
Operating junction temperature range	T_J	-65 to 175	℃
Storage temperature range	T_{stg}	-65 to 175	℃

RATINGS AND CHARACTERISTICS OF MUR1560D2-V

ELECTRICAL CHARACTERISTICS(T_A=25℃ Unless otherwise noted)

Parameters	Test Conditions		Symbol	Min.	Typ.	Max.	Units
Breakdown voltage Blocking voltage	I _R =200μA		V _{BR} V _R	600	—	—	V
Instaneous forward voltage	T _J =25℃	I _F =1.0A	V _F ¹⁾	—	0.84	—	V
		I _F =5.0A		—	1.12	—	
		I _F =15.0A		—	1.30	1.70	
	T _J =125℃	I _F =1.0A		—	0.63	—	
		I _F =5.0A		—	0.87	—	
		I _F =15.0A		—	1.10	—	
Reverse current	T _J =25℃	V _R =600V	I _R ²⁾	—	—	5	μ A
	T _J =125℃			—	—	50	μ A
	T _J =150℃			—	—	250	
Junction capacitance	4V,1MHz		C _J	—	106	—	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℃)

Parameters	Test Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse recovery time	I _F =0.5A,I _R =1A,I _{RR} =0.25A	trr	—	30	40	ns

RATINGS AND CHARACTERISTICS OF MUR1560D2-V

THERMAL CHARACTERISTICS

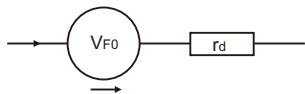
Parameter	Symbol	TO-263	Unit
Typical thermal resistance ³⁾	R θ Jc	2.5	°C/W

3. Thermal resistance from junction to case

AVAILABLE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton Size L×W×H(mm)	Quantity(box/carton)
MUR1560D2-V TO-263	P/T	558×148×38	1000	565×225×170	5

Equivalent circuits for forward power loss calculation



V_{F0}: threshold voltage 1.05V
r_d: Dynamic resistance 0.025Ω
Forward power loss of diode=V_{F0}×I_{F(AV)}+r_d×I_{F(RMS)}²

FIG.1-FORWARD CURRENT DERATING CURVE

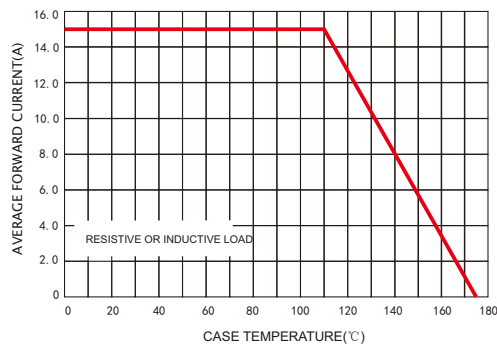
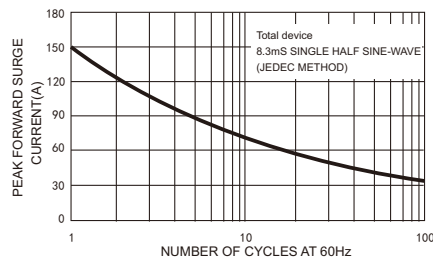


FIG2.-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



RATINGS AND CHARACTERISTICS OF MUR1560D2-V

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

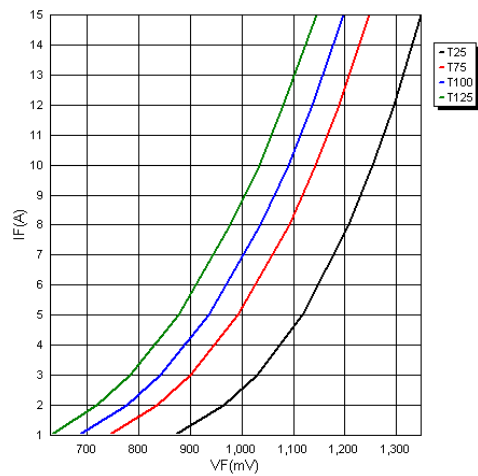


FIG.4-TYPICAL REVERSE CHARACTERISTICS

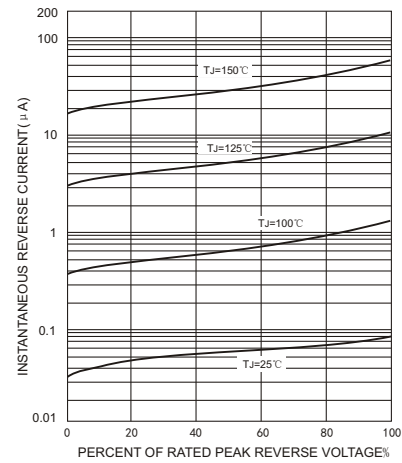
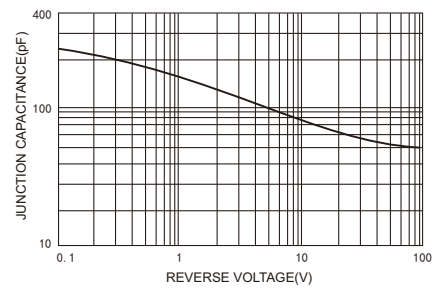
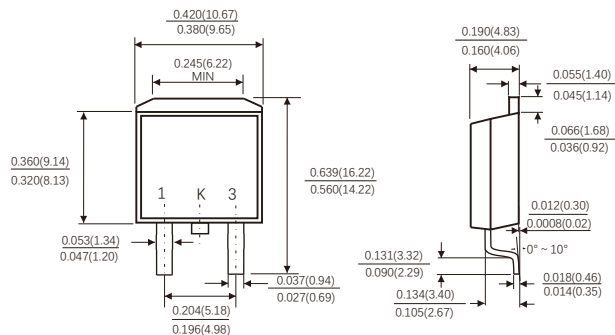


FIG.5-TYPICAL JUNCTION CAPACITANCE



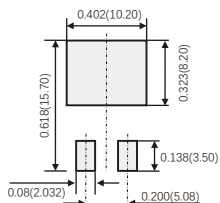
TO-263



Dimensions in inches and (millimeters)

Suggested Pad Layout

(TO-263)



(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)