SEMICONDUCTOR

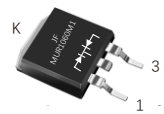
MUR1060M1

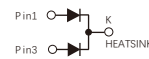
GLASS PASSIVATED SUPER FAST RECTIFIER
Reverse Voltage - 600 Volts
Forward Current -10.0Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low forward voltage drop
- Single rectifier construction
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds,
- Component in accordance to RoHS 2015/863/EU

TO-252
DPAK





Mechanical Data

- Case: JEDEC TO-252(DPAK) molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- 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	
$I_{F(AV)}$	5.0A
V_{RRM}	600V
I_{FSM} (Total device)	140A
V_F at I_F=5.0A(125℃)	1.20V
$I_{R\ MAX}$	1.0μA
T_J(Max)	150℃
Package	TO-252

Maximum Ratings And Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC method,Total device)	I_{FSM}	140	A
Rating for fusing(t=8.3ms)	I^2t	81.34	A^2S
Operating junction temperature range	T_J	-55 to 150	℃
Storge temperature range	Tstg	-55 to 150	℃

Electrical Characteristcs(Per Leg,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)	-	1.06	-	V
		I_F=3.0A		-	1.25	-	
		I_F=5.0A		-	1.35	1.70	
	T_J=125℃	I_F=1.0A		-	0.84	-	
		I_F=3.0A		-	1.06	-	
		I_F=5.0A		-	1.20	-	
Reverse current	T_J=25℃	V_R=600V	I_R 2)	-	-	1.0	μA
	T_J=125℃			-	-	50	μA
	T_J=150℃			-	-	150	
Junction capacitance	4V,1MHz		C_J	-	17	-	pF

Notes: 1.Pulse Test:300μS pulse width,1% duty cycle

2.Pulse test:pulse width≤40ms

Dynamic Recovery Characteristcs （Per Leg,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	-	24	35	ns

Thermal Characteristics

Parameter	Symbol	TO-252	Unit
Typical thermal resistance [3]	RθJC	1.3	℃/W

3. Thermal resistance from junction to case,Total device

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)
MUR1060M1-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)**
MUR1060M1-TO-252	Reel	364×364×250	346×346×23	φ328	10	1	2500	25

Fig.1-Forward Current Derating Curve

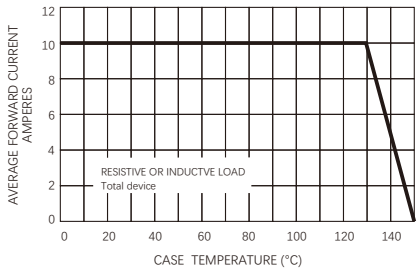


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

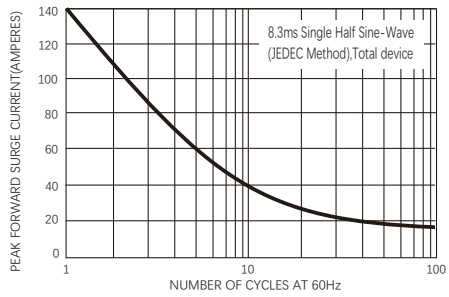


Fig.3-Typical Instantaneous Forward Characteristics,Per Leg

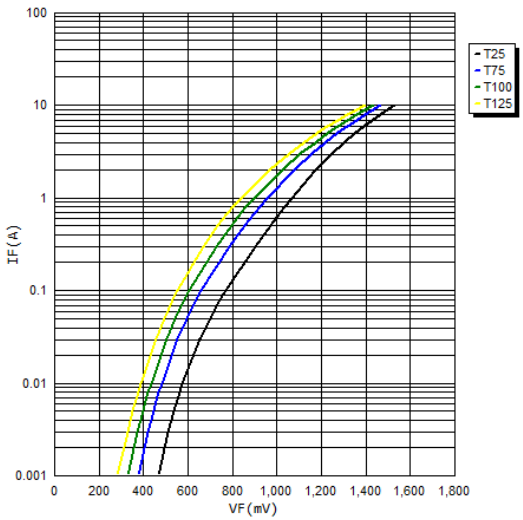
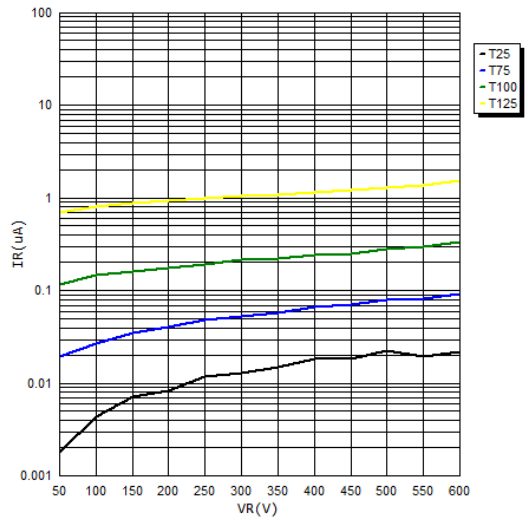
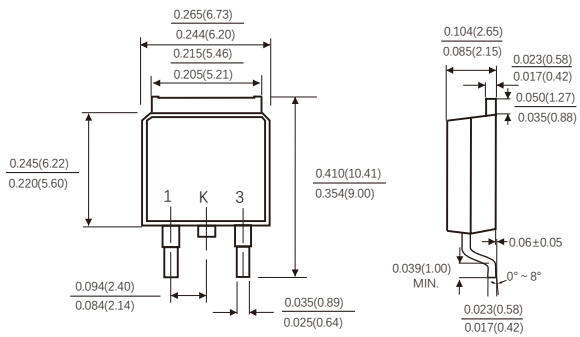


Fig.4-Typical Reverse Characteristics,Per Leg



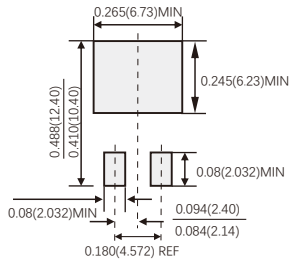
PACKAGE OUTLINE DIMENSIONS

TO-252



Suggested Pad Layout

(TO-252)



(设计者可参考推荐值根据焊接工艺
要求自行确定合的焊盘尺寸)
(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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