

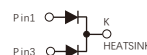
Features

- 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

Mechanical Data

- Case: JEDEC TO-252(DPAK) molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- Polarity: As marked
- Mounting Position: Any

TO-252
DPAK



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	
$I_F(AV)$	2×5.0A
V_{RRM}	400V
I_{FSM} (Total device)	120A
V_F at $I_F=5.0A(125^\circ C)$	0.95V
I_R MAX	1.0μA
$T_J(Max)$	150°C
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}	400	V
Maximum average forward rectified current	$I_F(AV)$	10.0	A
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (JEDEC method,Total device)	I_{FSM}	120	A
Rating for fusing($t=8.3ms$)	I^2t	59.76	A ² S
Operating junction temperature range	T_J	-55 to 150	°C
Storage temperature range	T_{stg}	-55 to 150	°C

Electrical Characteristics(Per Leg, $T_a=25^\circ\text{C}$ Unless Otherwise Noted)

Parameters	Test Conditions		Symbol	Min.	Typ.	Max.	Units
Breakdown voltage Blocking voltage	$I_R=200\mu\text{A}$		V_{BR} V_R	400	-	-	V
Instaneous forward voltage	$T_J=25^\circ\text{C}$	$I_F=1.0\text{A}$	V_F 1)	-	0.90	-	V
		$I_F=3.0\text{A}$		-	1.04	-	
		$I_F=5.0\text{A}$		-	1.12	1.25	
	$T_J=125^\circ\text{C}$	$I_F=1.0\text{A}$		-	0.71	-	
		$I_F=3.0\text{A}$		-	0.86	-	
		$I_F=5.0\text{A}$		-	0.95	-	
Reverse current	$T_J=25^\circ\text{C}$	$V_R=400\text{V}$	I_R 2)	-	-	1.0	μA
	$T_J=125^\circ\text{C}$			-	-	20	μA
	$T_J=150^\circ\text{C}$			-	-	50	
Junction capacitance	4V,1MHz		C_J	-	23	-	pF

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

2.Pulse test:pulse width $\leq 40\text{ms}$

Dynamic Recovery Characteristics (Per Leg, $T_J=25^\circ\text{C}$)

Parameters	Test Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse recovery time	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$	t_{rr}	-	25	35	ns

Thermal Characteristics

Parameter	Symbol	TO-252	Unit
Typical thermal resistance ³⁾	$R_{\theta JC}$	1.3	$^{\circ}\text{C}/\text{W}$

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)
MUR1040M1- 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)
MUR1040M1- TO-252	Reel	364×364×250	346×346×23	φ328	10	1	2500	25

Fig.1-Forward Current Derating Curve

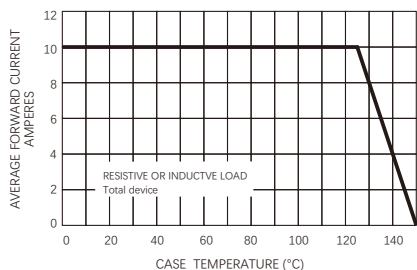


Fig.2-Maximum Non-repetitive Peak Forward Surge Current

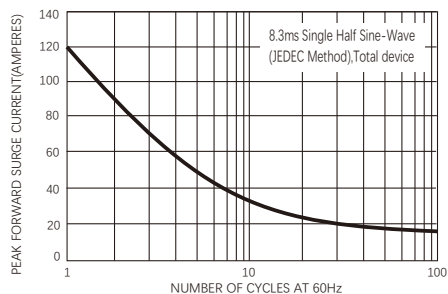
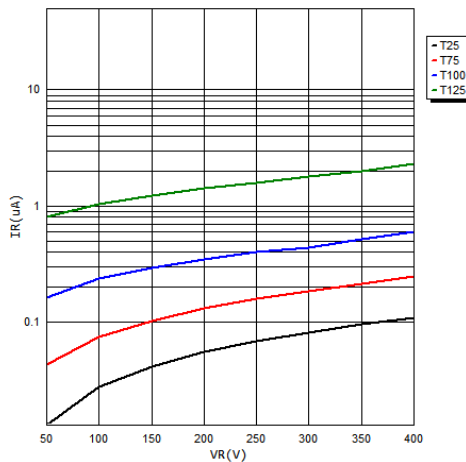
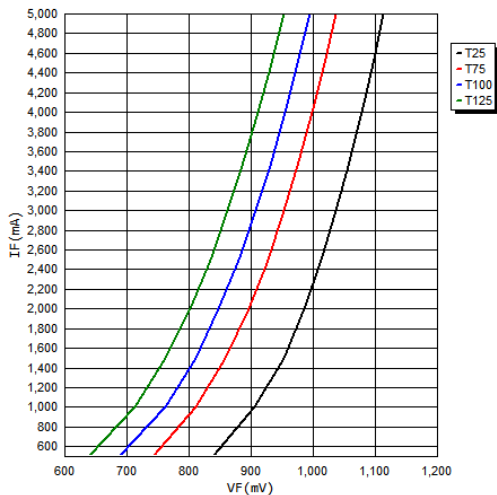


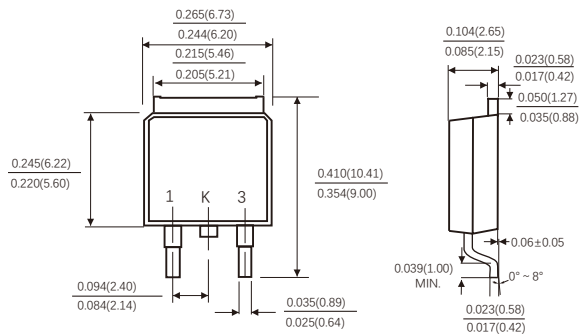
Fig.3-Typical Instantaneous Forward Characteristics,Per Leg

Fig.4-Typical Reverse Characteristics,Per Leg



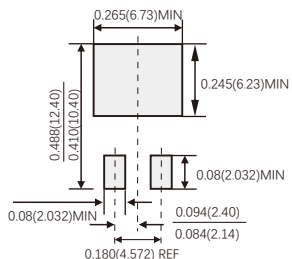
PACKAGE OUTLINE DIMENSIONS

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)

Dimensions in inches and (millimeters)

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