

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Polyimide passivation
- 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: 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

## 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%.)

Parameter	Symbols	Value	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	Volts
Maximum RMS voltage	$V_{RMS}$	420	Volts
Maximum DC blocking voltage	$V_{DC}$	600	Volts
Maximum average forward rectified current(see Fig.1)	$I_{(AV)}$	20.0	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200	Amps
Maximum instantaneous forward voltage $I_F=20A$ (Note 1 )	$V_F$	1.70	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$T_A=25^{\circ}C$	5	$\mu A$
	$T_A=125^{\circ}C$	100	
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	45	ns
Max thermal resistance (Note 3)	$R_{\theta JC}$	2.0	$^{\circ}C/W$
Operating junction temperature range	$T_J$	-55 to+150	$^{\circ}C$
Storage temperature range	$T_{STG}$	-55 to+150	$^{\circ}C$

Notes: 1. Pulse test: 300 $\mu s$  pulse width,1% duty cycle  
2. Reverse recovery test conditions  $I_F=0.5A,I_R=1.0A,I_{rr}=0.25A$   
3. Thermal resistance from junction to case

TO-252  
DPAK

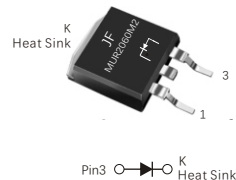


FIG.1-FORWARD CURRENT DERATING CURVE

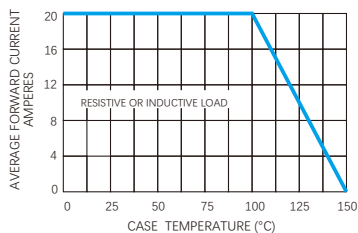


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

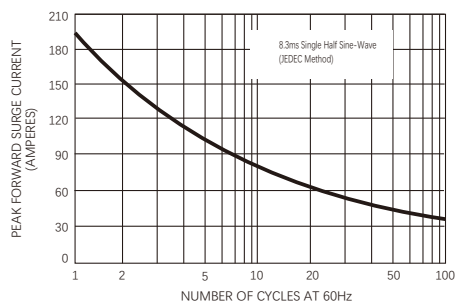


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

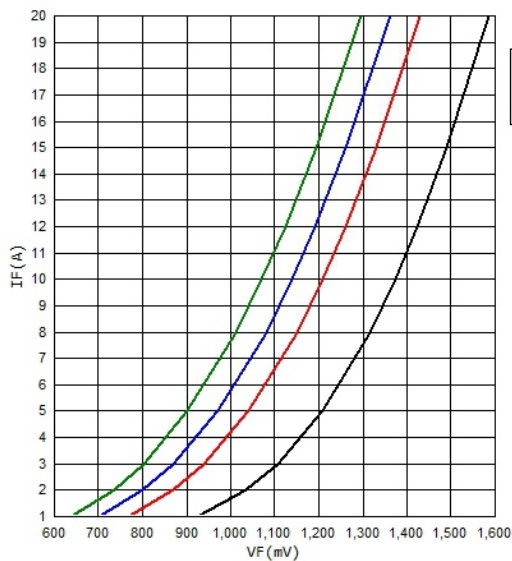
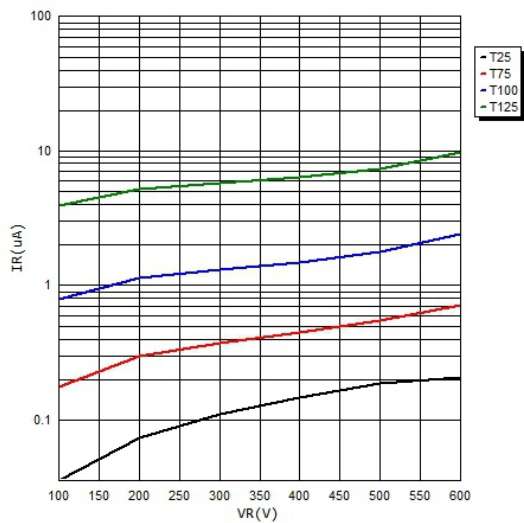
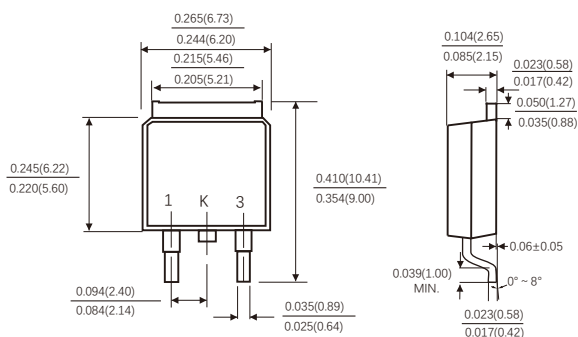


FIG.4-TYPICAL REVERSE CHARACTERISTICS



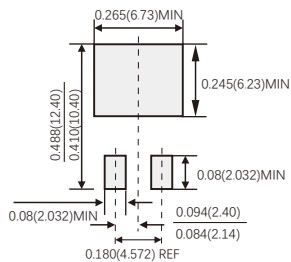
Dimensions in inches and (millimeters)

## 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)

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