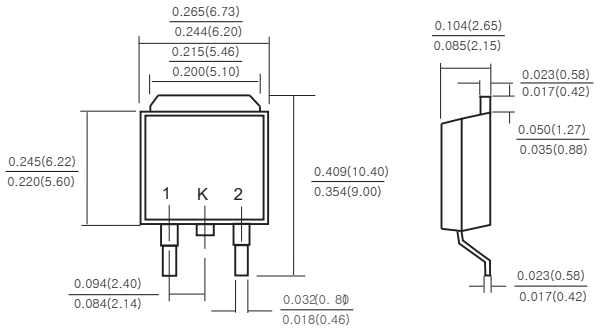
POLYIMIDE PASSIVATED SUPER FAST RECTIFIER
Reverse Voltage - 400 Volts
Forward Current - 10.0Amperes

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
- High temperature soldering guaranteed:260 ℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU
- AEC-Q101 qualified and PPAP capable



TO-252AC
(DPAK)



Dimensions in inches and (milimeters)

MECHANICAL DATA

- Case: JEDEC TO-252AC 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

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	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 at rated T_L)	I_{FSM}	110	A
Operating junction temperature range	T_J	-55 to+175	℃
Storage temperature range	T_{stg}	-55 to+175	℃

ELECTRICAL CHARACTERISTICS (T_J=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=100μA		V_{BR} V_R	400	–	–	V
Instaneous forward voltage	T_J=25℃	I_F=1.0A	V_F 1)	-	0.80	–	V
		I_F=5.0A		-	0.98	-	
		I_F=10.0A		-	1.09	1.30	
	T_J=125℃	I_F=1.0A		-	0.63	-	
		IF=5.0A		-	0.84	-	
		I_F=10.0A		-	0.98	-	
Reverse current	T_J=25℃	V_R=600V	I_R 2)	-	0.2	2	μA
	T_J=100℃			-	1.0	-	μA
	T_J=125℃			-	5	50	
Junction capacitance	4V,1MHz		C_J	-	63	-	pF

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle
2.Pulse test: pulse width ≤40ms

DYNAMIC RECOVERY CHARACTERISTCS (T_J=25℃ Unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	I_F=0.5A,I_R=1A,I_{RR}=0.25A	trr	-	21	35	ns

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-252	Unit
Typical thermal resistance 3)	$R_{\theta JL}$	1.4	℃/W

3 Units mounted on recommended PCB 1 oz. Pad layout

AVAILABALE PACK INFORMATION

Product code	Package	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton SizeL×W×H(mm)	Quantity(box/carton)
MUR1040M3-TO-252	P/T	558×148×38	4000	565×225×170	5

FIG.1-FORWARD CURRENT DERATING CURVE

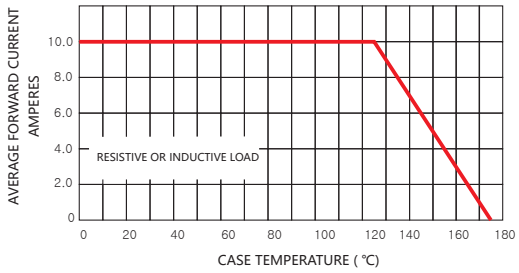


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

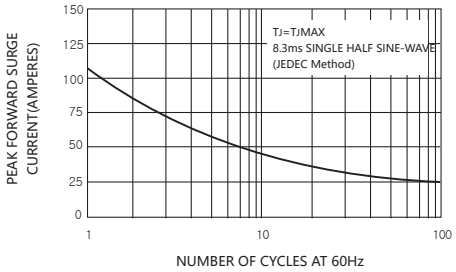


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

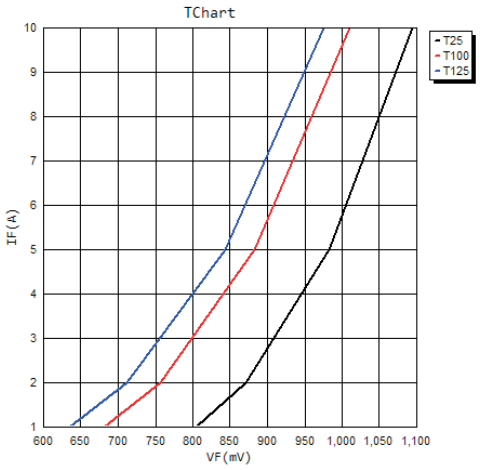


FIG.4-TYPICAL REVERSE CHARACTERISTICS

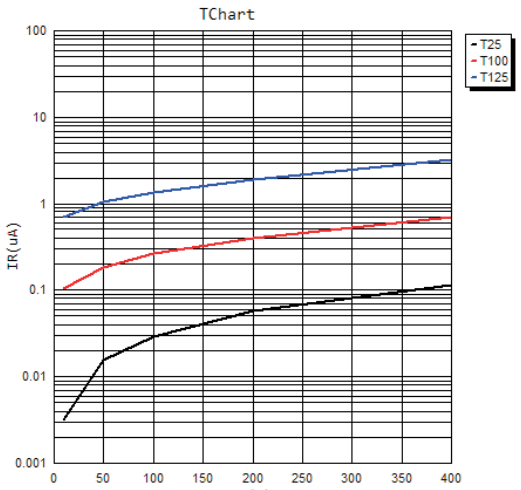
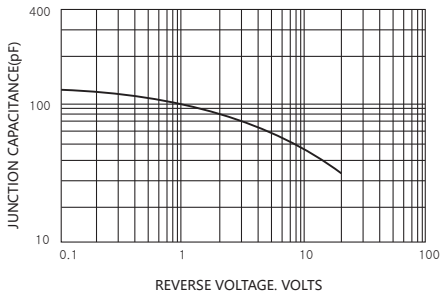


FIG.5-TYPICAL JUNCTION CAPACITANCE



Suggested Pad Layout

（TO-252）

