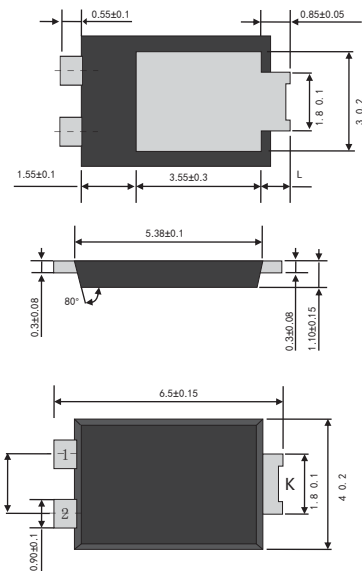


FEATURES

- 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 °C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



TO-277

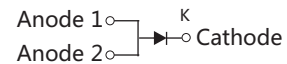


MECHANICAL DATA

- Case: TO-277 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.092 grams (approx)

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



Dimensions in millimeters

MAXIMUM RATINGS

(Ratings at 25°C 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_J)	I_{FSM}	110	A
Operating junction temperature range	T_J	-55 to +175	°C
Storage temperature range	T_{stg}	-55 to +175	°C

RATINGS AND CHARACTERISTICS OF MURP1040

ELECTRICAL CHARACTERISTICS($T_J=25^{\circ}\text{C}$ Unless otherwise noted)

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

Notes: 1.Pulse test: 300 μ s pulse width,1% duty cycle

2.Pulse test: pulse width \leq 40ms

DYNAMIC RECOVERY CHARACTERISTICS ($T_J=25^{\circ}\text{C}$ Unless otherwise noted)

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

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance ³⁾	$R_{\theta JL}$	3.0	$^{\circ}\text{C}/\text{W}$

3 Units mounted on recommended PCB 1 oz. Pad layout

RATINGS AND CHARACTERISTICS OF MURP1040

AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L W H (mm)	Quantity (reel/box)	Carton Size L W H (mm)	Quantity (box/carton)
MURP1040 -TO-277	T/R	φ330	5000	338 338 40	2	365 365 360	7

FIG.1-FORWARD CURRENT DERATING CURVE

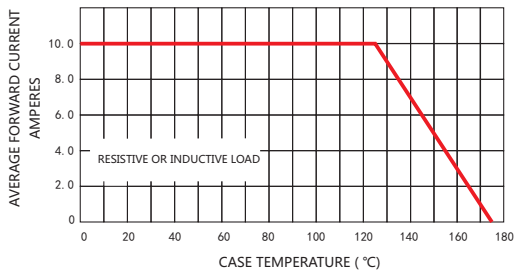


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

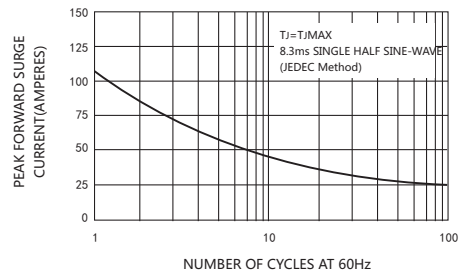


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

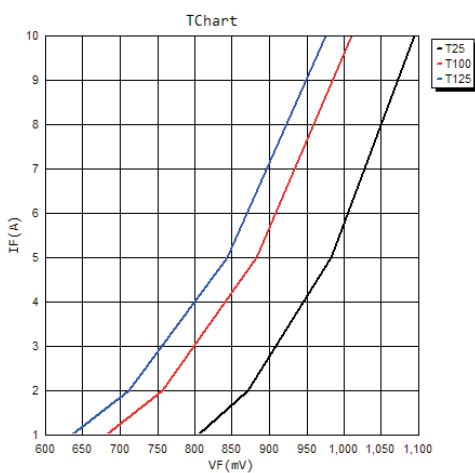
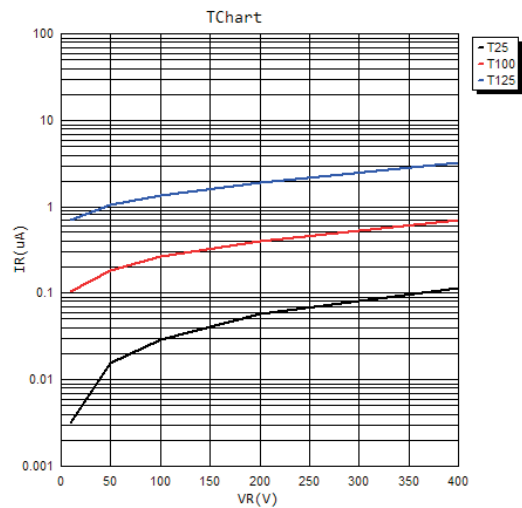
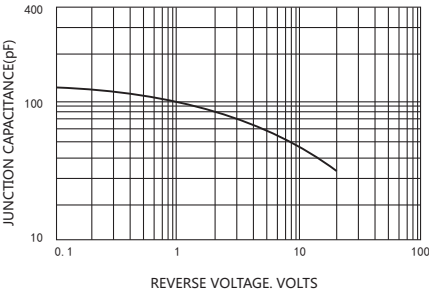


FIG.4-TYPICAL REVERSE CHARACTERISTICS

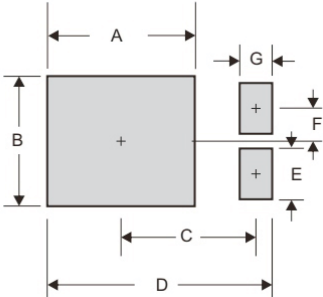


RATINGS AND CHARACTERISTICS OF MURP1040

FIG.5-TYPICAL JUNCTION CAPACITANCE



■ TO-277B foot print



A	B	C	D	E	F	G
0.185 (4.70)	0.142 (3.60)	0.152 (3.87)	0.260 (6.60)	0.055 (1.40)	0.035 (0.90)	0.031 (0.80)

Dimensions in inches and (millimeters)

RATINGS AND CHARACTERISTICS OF MURP1040

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