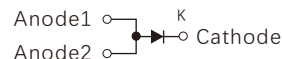
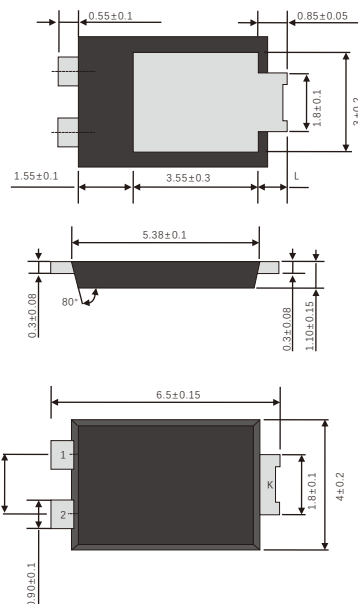


### FEATURES

- 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 2015/863/EU



### TO-277



Dimensions in inches and (millimeters)

### 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

### 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	$I_{F(AV)}$	15.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated $T_J$ )	$I_{FSM}$	150	A
Operating junction temperature range	$T_J$	-55 to+150	°C
Storage temperature range	$T_{stg}$	-55 to+150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200μA		VBR VR	400	-	-	V
Instaneous forward voltage	Tj=25°C	I <sub>F</sub> =5.0A	VF <sup>1)</sup>	-	0.99	-	V
		I <sub>F</sub> =15.0A		-	1.20	1.30	
	Tj=125°C	I <sub>F</sub> =5.0A		-	0.85	-	
		I <sub>F</sub> =15.0A		-	1.10	1.20	
Reverse current	Tj=25°C	VR=400V	IR <sup>2)</sup>	-	-	5.0	μA
	Tj=125°C			-	-	250	
Junction capacitance	4V,1MHz		CJ	-	50	-	pF

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

2.Pulse test: pulse width≤40ms

## DYNAMIC RECOVERY CHARACTERISTICS (T<sub>J</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max .	Unit
Reverse recovery time	I <sub>F</sub> =1.0A,dI <sub>F</sub> /dt=200A/μs,V <sub>R</sub> =30V	t <sub>rr</sub>	-	24	-	ns
	I <sub>F</sub> =1.0A,I <sub>R</sub> =1A,I <sub>RR</sub> =0.25A		-	28	35	

## THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJL</sub>	3.0	°C/W

3 Units mounted on recommended PCB 1 oz. Pad layout

## AVAILABLE PACK INFORMATION

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(K)	Quantity(carton) (K)
MURP1540 -TO-277	Reel	370×370×360	338×338×39	φ330	7	2	5	70

FIG.1-FORWARD CURRENT DERATING CURVE

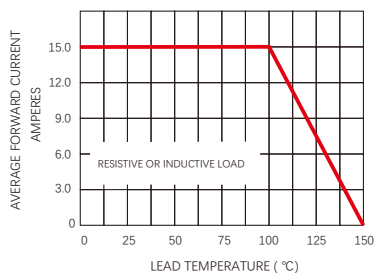


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

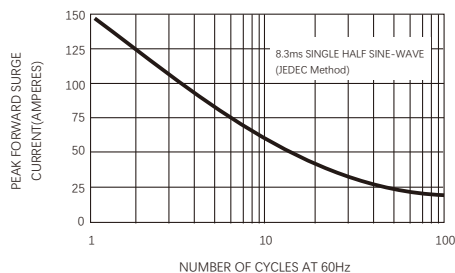


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

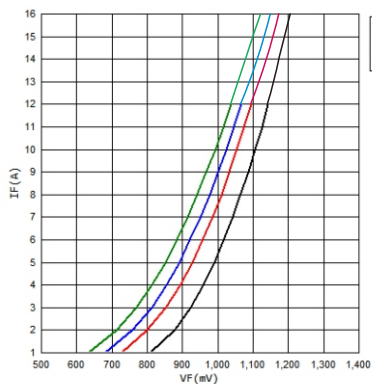


FIG.4-TYPICAL REVERSE CHARACTERISTICS

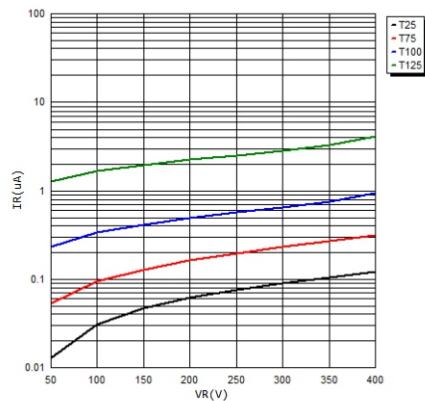
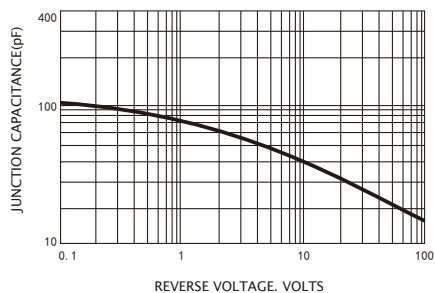
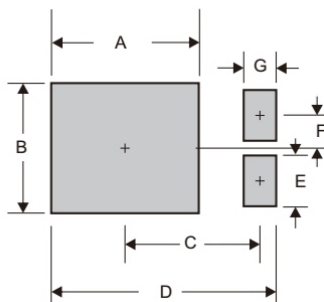


FIG.5-TYPICAL JUNCTION CAPACITANCE



## ■ 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)

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