

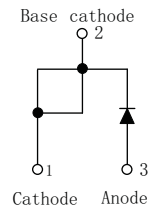
## FEATURES

- 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
- Meets JESD 201 class 2 whisker test
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

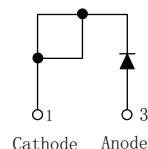


RoHS  
COMPLIANT

TO-220AC



ITO-220AC



## MECHANICAL DATA

- Case: JEDEC TO-220AC ITO-220AC 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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	12.0A
$V_R$	600V
$I_{FSM}$	100A
$V_f$ at $I_F=12.0A, 125^\circ C$	1.60V
$T_{rr typ}$	17ns
$T_{JMAX}$	175°C
Diode variation	Single die

## MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum average forward rectified current	$I_{F(AV)}$	12.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated $T_J$ )	$I_{FSM}$	100	A
Operating junction temperature range	$T_J$	-55 to +175	°C
Storage temperature range	$T_{stg}$	-55 to +175	°C

## RATINGS AND CHARACTERISTIC OF MURS1260\MURFS1260

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

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	I <sub>R</sub> =200μA		V <sub>BR</sub> V <sub>R</sub>	600	–	–	V
Instaneous forward voltage	T <sub>J</sub> =25°C	I <sub>F</sub> =1.0A	V <sub>F</sub> <sup>1)</sup>	–	1.10	–	V
		I <sub>F</sub> =5.0A		–	1.70	–	
		I <sub>F</sub> =12.0A		–	2.10	2.50	
	T <sub>J</sub> =125°C	I <sub>F</sub> =1.0A		–	0.80	–	
		I <sub>F</sub> =5.0A		–	1.20	–	
		I <sub>F</sub> =12.0A		–	1.60	–	
Reverse current	T <sub>J</sub> =25°C	V <sub>R</sub> =600V	I <sub>R</sub> <sup>2)</sup>	–	0.1	5	μ A
	T <sub>J</sub> =100°C			–	5.0	–	μ A
	T <sub>J</sub> =125°C			–	15	50	
Junction capacitance	4V, 1MHz		C <sub>J</sub>	–	45	–	pF

Notes: 1.Pulse test: 300 μs 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> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A	t <sub>rr</sub>	–	17	25	ns

# RATINGS AND CHARACTERISTIC OF MURS1260\MURFS1260

## THERMAL CHARACTERISTICS

Parameter	Symbol	TO-220AC	ITO-220ABC	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta jc}$	2.5	4.5	$^{\circ}\text{C}/\text{W}$

3.Thermal resistance from junction to case

## AVAILABLE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm)	Quantity (pcs/box)	Carton SizeL×W×H(mm)	Quantity (box/carton)
MURS1260-TO-220AC	P/T	558×148×38	1000	565×225×170	5
MURFS1260-ITO-220AC	P/T	558×148×38	1000	565×225×170	5

FIG.1-FORWARD CURRENT DERATING CURVE

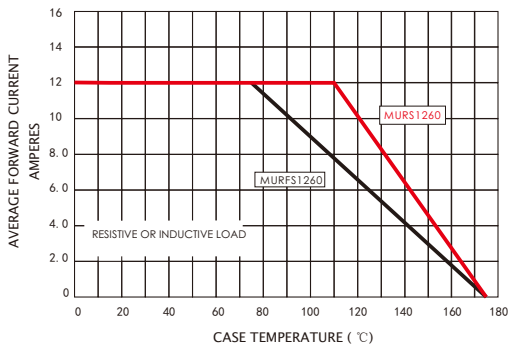
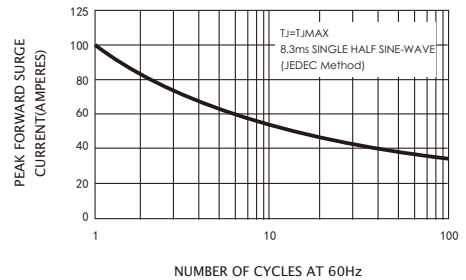


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



# RATINGS AND CHARACTERISTIC OF MURS1260\MURFS1260

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

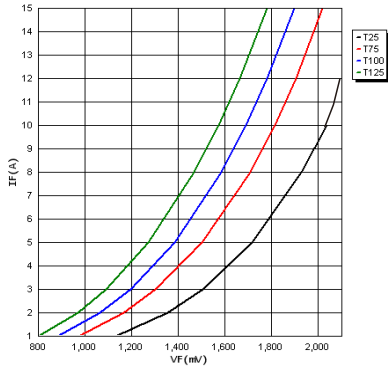
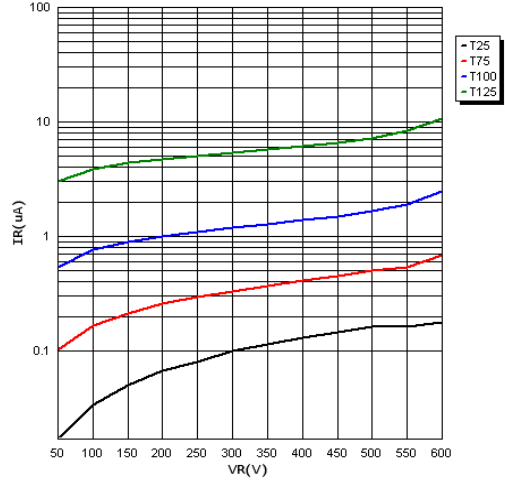
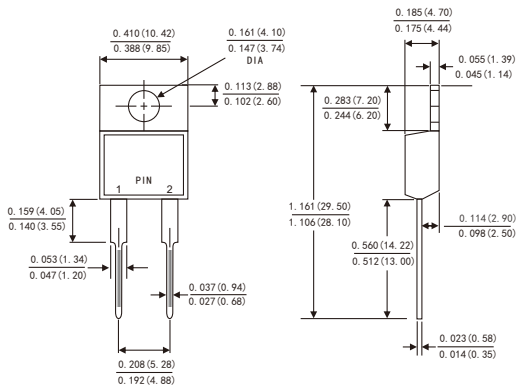


FIG.4-TYPICAL REVERSE CHARACTERISTICS



## PACKAGE OUTLINE DIMENSIONS

### TO-220AC



### ITO-220AC

