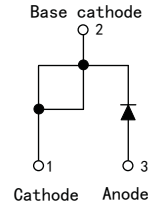
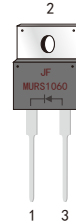


### FEATURES

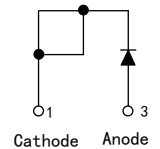
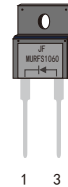
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ultrafast and soft recovery time for high efficiency
- Low VF ,Low power loss
- Polyimide passivation
- High surge capability
- Meets JESD 201 class 2 whisker test
- High temperature soldering guaranteed:260 °C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



T0-220AC



IT0-220AC



### MECHANICAL DATA

- Case: JEDEC T0-220AC IT0-220AC 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	
$I_F(AV)$	10A
$V_R$	600V
$I_{FSM}$	100A
$V_f$ at $I_F=10A, 125^\circ C$	1.60V
$T_{rr typ}$	20ns
$T_{JMAX}$	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	$I_F(AV)$	10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T L)	$I_{FSM}$	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 MURS1060\MURFS1060

## 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> =200 μA		V <sub>BR</sub> V <sub>R</sub>	600	—	—	V
Instaneous forward voltage	T <sub>J</sub> =25°C	I <sub>F</sub> =1A	V <sub>F</sub> <sup>1)</sup>	—	1.10	—	V
		I <sub>F</sub> =5A		—	1.70	—	
		I <sub>F</sub> =10A		—	2.10	2.40	
	T <sub>J</sub> =125°C	I <sub>F</sub> =1A		—	0.80	—	
		I <sub>F</sub> =5A		—	1.20	—	
		I <sub>F</sub> =10A		—	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	μA
	T <sub>J</sub> =100°C			—	5.0	—	μA
	T <sub>J</sub> =125°C			—	15	50	
Junction capacitance	4V, 1MHz		C <sub>J</sub>	—	33	—	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> =0.5A, I <sub>R</sub> =1.0A, I <sub>RR</sub> =0.25A	t <sub>rr</sub>	—	20	25	ns

# RATINGS AND CHARACTERISTIC OF MURS1060\MURFS1060

## THERMAL CHARACTERISTICS

Parameter	Symbol	T0-220AC	IT0-220AC	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta jc}$	2.5	4.5	°C/W

3. Thermal resistance from junction to case

## AVAILABLE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm )	Quantity (pcs/box)	Carton Size L×W×H(mm )	Quantity (box/carton)
MURS1060-T0-220AC	P/T	558×148×38	1000	565×225×170	5
MURFS1060-IT0-220AC	P/T	558×148×38	1000	565×225×170	5

FIG. 1-FORWARD CURRENT DERATING CURVE

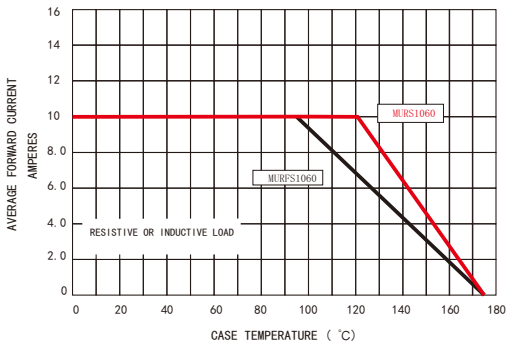
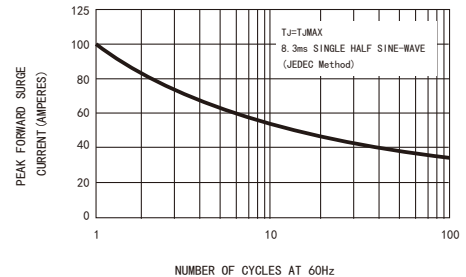


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



# RATINGS AND CHARACTERISTIC OF MURS1060\MURFS1060

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

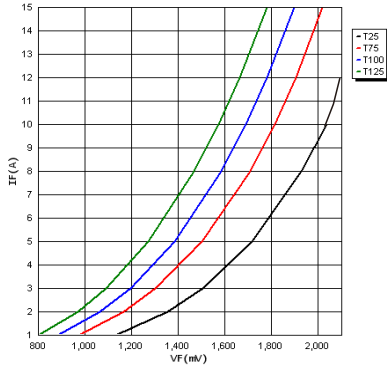
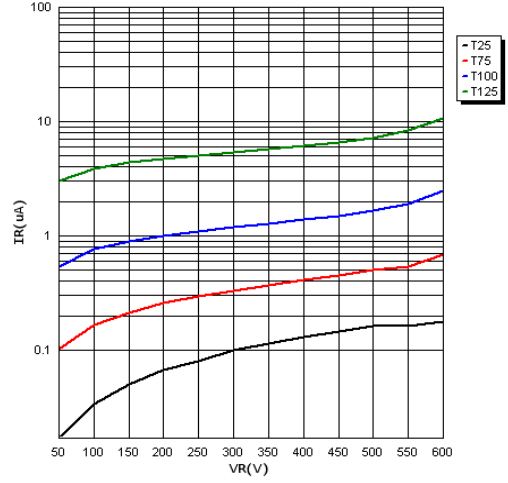
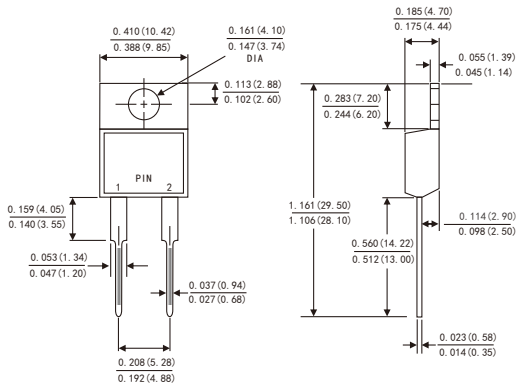


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



## PACKAGEE OUTLINE DIMENSIONS

### TO-220AC



### ITO-220AC

