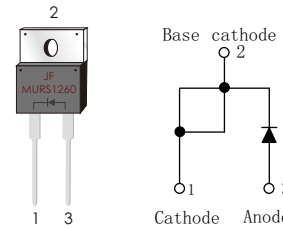
SEMICONDUCTOR

MURS1260 MURFS1260

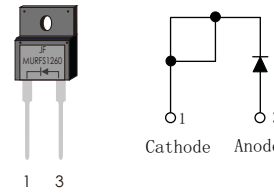
POLYIMIDE PASSIVATED SUPER FAST RECTIFIER

Reverse Voltage - 600 Volts
Forward Current - 12.0Amperes

TO-220AC



ITO-220AC



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

Pb
RoHS
COMPLIANT

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℃	1.60V
Trr typ	17ns
T_{JMAX}	175℃
Diode variation	Sigle die

MAXIMUM RATINGS

(Ratings at 25℃ 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_L)	I_{FSM}	100	A
Operating junction temperature range	T_J	-55 to+175	℃
Storage temperature range	T_{stg}	-55 to+175	℃

RATINGS AND CHARACTERISTIC OF MURS1260\MURFS1260

ELECTRICAL CHARACTERISTCS（T_J=25℃ Unless otherwise noted）

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=200μA		V_{BR} V_R	600	–	–	V
Instaneous forward voltage	T_J=25℃	I_F=1.0A	V_F 1)	–	1.10	–	V
		I_F=5.0A		–	1.70	–	
		I_F=12.0A		–	2.10	2.50	
	T_J=125℃	I_F=1.0A		–	0.80	–	
		I_F=5.0A		–	1.20	–	
		I_F=12.0A		–	1.60	–	
Reverse current	T_J=25℃	V_R=600V	I_R 2)	–	0.1	10	μA
	T_J=100℃			–	5.0	–	μA
	T_J=125℃			–	15	–	
Junction capacitance	4V,1MHz		C_J	–	45	–	pF

Notes: 1.Pulse test: 300 μs 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=1.0A, I_{RR}=0.25A	trr	-	17	25	ns

RATINGS AND CHARACTERISTIC OF MURS1260\MURFS1260

THERMAL CHARACTERISTCS

Parameter	Symbol	TO-220AC	ITO-220ABC	Unit
Typical thermal resistance 3)	RθJC	2.5	4.5	℃/W

3.Thermal resistance from junction to case

AVAILABALE 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

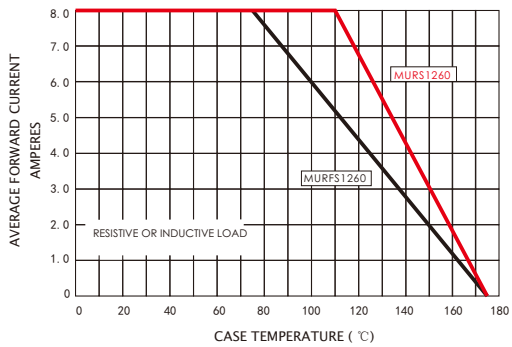
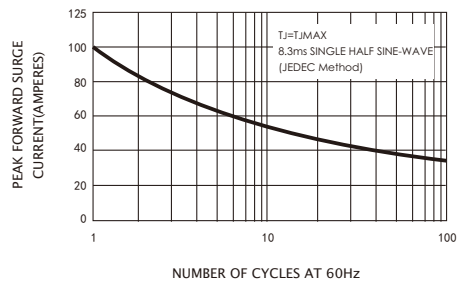


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



RATINGS AND CHARACTERISTIC OF MURS1260\MURFS1260

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

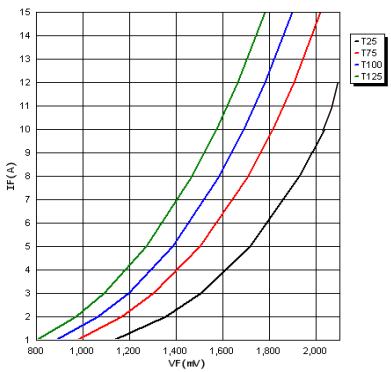
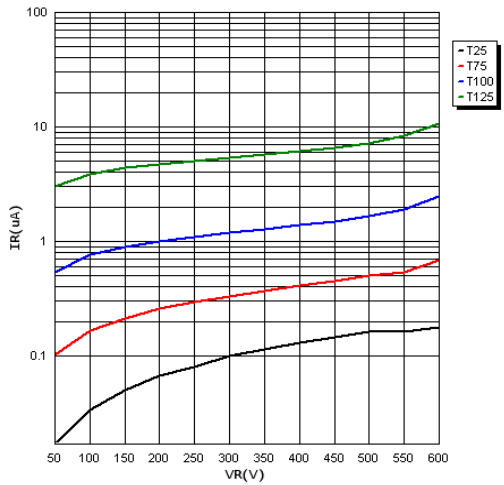
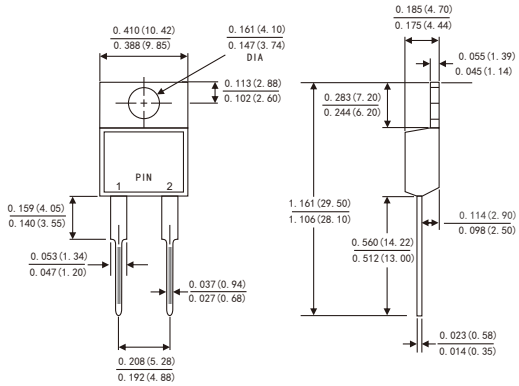


FIG.4-TYPICAL REVERSE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

TO-220AC



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