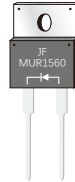
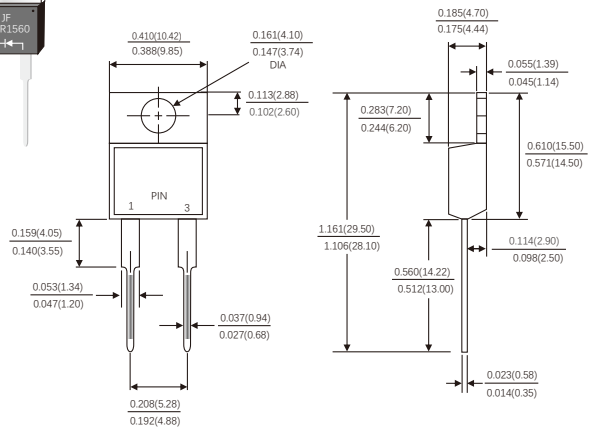


### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ultrafast and soft recovery time for high efficiency
- Low VF ,Low power loss
- Soft recovery characteristics
- Polyimide passivation
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



### TO-220AC



### MECHANICAL DATA

- Case: JEDEC TO-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

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	600	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	15	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T <sub>J</sub> )	I <sub>FSM</sub>	180	A
Operating junction temperature range	T <sub>J</sub>	-55 to+150	°C
Storage temperature range	T <sub>stg</sub>	-55 to+150	°C

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

Parameters	Test Conditions	Symbol	Min.	Typ.	Max.	Units	
Breakdown voltage Blocking voltage	$I_R=200\mu\text{A}$	$V_{BR}$ $V_R$	600	-	-	V	
Instaneous forward voltage	$T_J=25^\circ\text{C}$	$I_F=1.0\text{A}$	-	0.84	-	V	
		$I_F=5.0\text{A}$	-	1.12	-		
		$I_F=15.0\text{A}$	-	1.30	1.70		
	$T_J=125^\circ\text{C}$	$I_F=1.0\text{A}$	-	0.63	-		
		$I_F=5.0\text{A}$	-	0.87	-		
		$I_F=15.0\text{A}$	-	1.10	-		
Reverse current	$T_J=25^\circ\text{C}$	$V_R=600\text{V}$	$I_R$ 2)	-	-	5.0	$\mu\text{A}$
	$T_J=125^\circ\text{C}$			-	-	50	$\mu\text{A}$
Junction capacitance	4V,1MHz	$C_J$	-	76	-	pF	

Notes: 1.Pulse Test:300 $\mu\text{s}$  pulse width,1% duty cycle

2.Pulse test:pulse width  $\leq 40\text{ms}$

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

Parameters	Test Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse recovery time	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$	$t_{rr}$	-	30	40	ns
Reverse recovery time	$I_F=1.0\text{A}, di/dt=200\text{A}/\mu\text{s}, V_R=30\text{V}$	$t_{rr}$	-	25	-	
Reverse recovery time	$I_F=15\text{A}, di/dt=200\text{A}/\mu\text{s}, V_R=400\text{V}, T_J=25^\circ\text{C}$	$t_{rr}$	-	40	-	
Peak recovery current		$I_{RRM}$	-	5.5	-	A
Reverse recovery charge		$Q_{RR}$	-	114	-	nc

## THERMAL CHARACTERISTICS

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

3.Thermal resistance from junction to case

## AVAILABLE PACK INFORMATION

Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Tube Length (mm)	Inner Box Number	Tube Number Per A Inner Box	Part Number Per A Tube	Quantity(carton) (K)
MUR1560-TO-220AC	Tube	565×225×170	548×151×37	540	5	20	50	5

FIG.1-FORWARD CURRENT DERATING CURVE

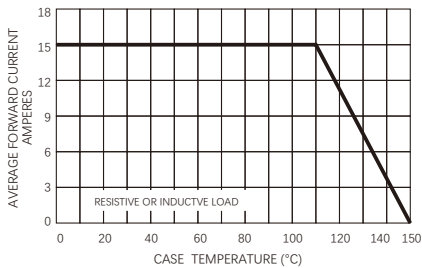


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

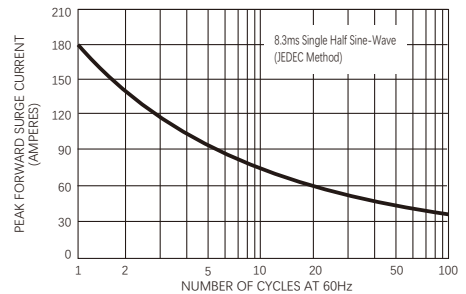


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

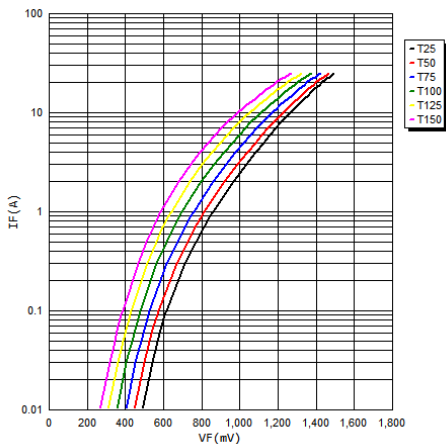


FIG.4-TYPICAL REVERSE CHARACTERISTICS

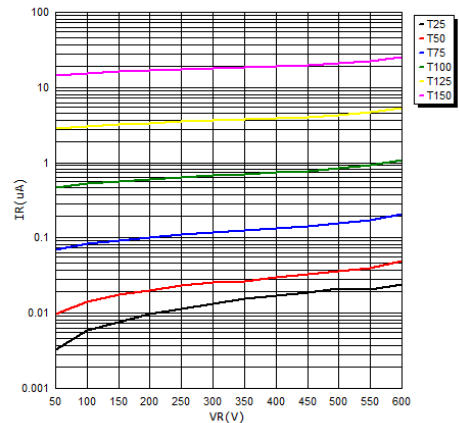


FIG.5-TIPCAL REVERSE RECOVERY TIME VS di/dt

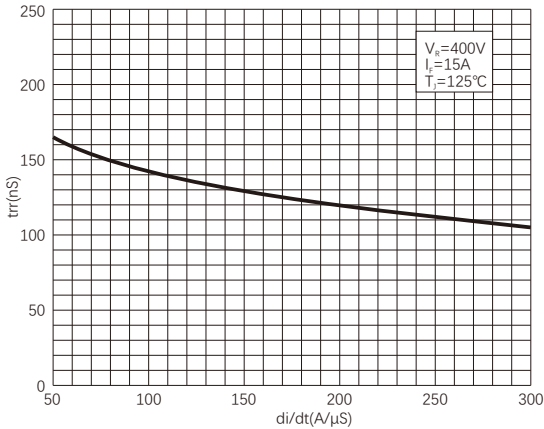
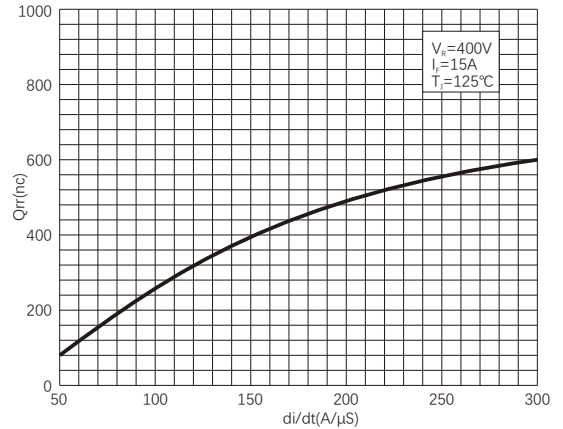


FIG.5-TIPCAL REVERSE RECOVERY charge VS di/dt



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