

Pb Free Plating Product

## SFF15A60U



15Amperes,600Volts Insulated Hyper Fast Soft Recovery Epitaxial Diode

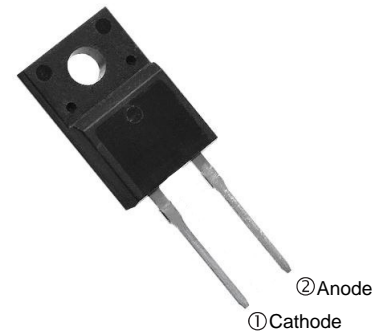
### APPLICATION

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS

### PRODUCT FEATURE

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- 175 Operating Junction Temperature
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

ITO-220AC/TO-220F-2L



Internal Configuration



### GENERAL DESCRIPTION

SFF15A60U using the latest FRED FAB process(planar passivation pellet) with ultrafast and soft recovery characteristics.

Absolute Maximum Ratings				
Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	$V_{RRM}$		600	V
Continuous forward current	$I_{F(AV)}$	$T_c = 110^\circ\text{C}$	15	A
Single pulse forward current	$I_{FSM}$	$T_c = 25^\circ\text{C}$	120	
Maximum repetitive forward current	$I_{FRM}$	Square wave, 20kHz	30	
Operating junction	$T_j$		175	$^\circ\text{C}$
Storage temperatures	$T_{stg}$		-55 to +175	$^\circ\text{C}$

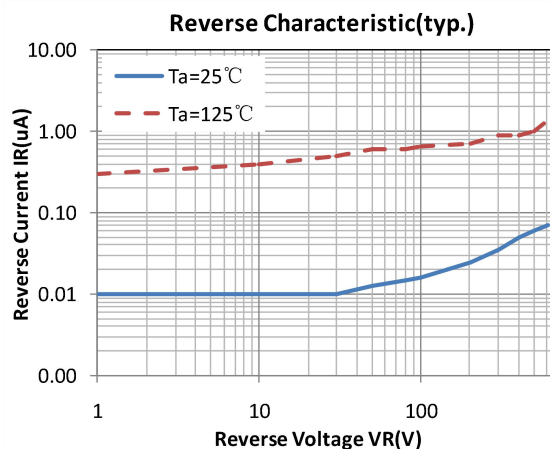
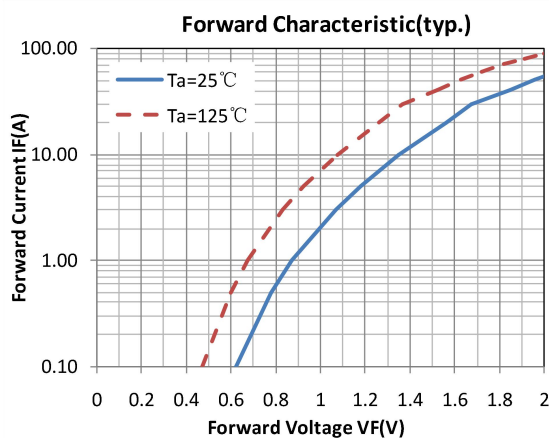
### Electrical characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	$V_{BR}$ , $V_R$	$I_R=100\mu A$	600			V
Forward voltage (Per Diode)	$V_F$	$I_F=15A$		1.35	1.60	
		$I_F=15A, T_j=125^\circ C$		1.20	1.40	
Reverse leakage current(Per Diode)	$I_R$	$V_R=V_{RRM}$			20	$\mu A$
		$T_j=150^\circ C, V_R=600V$			200	
Reverse recovery time(Per Diode)	$t_{rr}$	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$		28	35	ns
		$I_F=1A, V_R=30V, di/dt=200A/\mu s$		22	25	

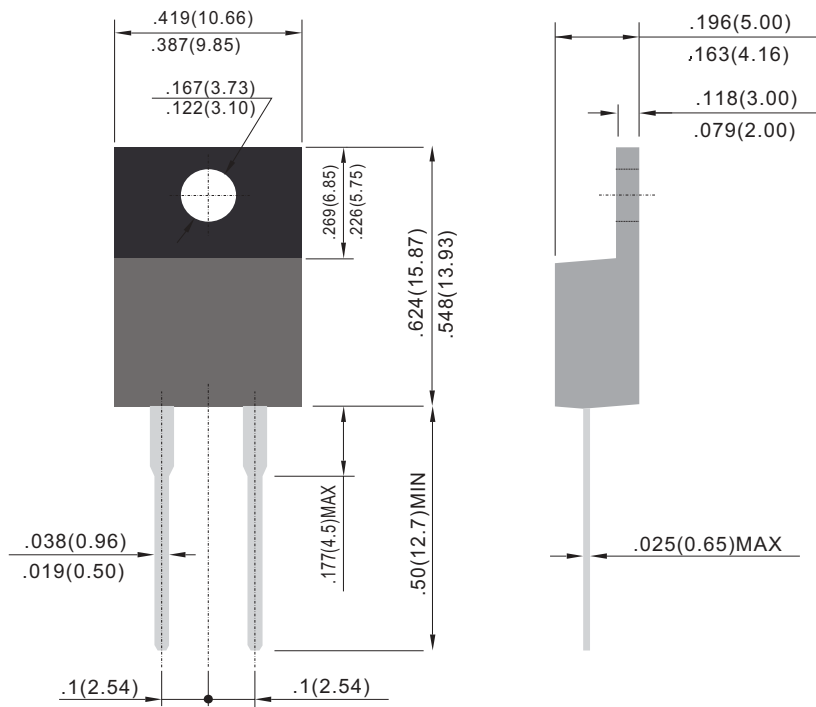
### Thermal characteristics

Paramter	Symbol	Typ	Units
Junction-to-Case	$R_{\theta JC}$	3.0	$^\circ C/W$

### Electrical performance (typic)



ITO-220AC/TO-220F-2L Package Outline:



Unit : inch (mm)