

ITO-220AC

Features
<ul style="list-style-type: none"> • Rated to 650V at 6 Amps • Zero Reverse Recovery Current • Zero Forward Recovery Voltage • High-Frequency Operation • Temperature-Independent Switching Behavior • High temperature operation • Marking:ESIC06065SF

Application
<ul style="list-style-type: none"> • SMPS, e.g., CCM PFC • Motor drives, Solar application, UPS, Wind turbine, Rail traction, EV/HEV

Ordering Information		
Part No.	Package	Packing
ESIC06065SF	ITO-220AC	50 & 2000 / Tube & Box

Benefits
<ul style="list-style-type: none"> • Unipolar rectifier • Substantially reduced switching losses • No thermal run-away with parallel devices • Reduced heat sink requirements

Absolute Maximum Ratings (T _A =25°C unless otherwise specified)				
Parameter	Symbol	Conditions	Limit	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	T _C =25°C	650	V
Surge Peak Reverse Voltage	V _{RSM}	T _C =25°C	650	V
DC Blocking Voltage	V _{DC}	T _C =25°C	650	V
Continuous Forward Current	I _F	T _C =25°C	12	A
		T _C =100°C	8	
		T _C =125°C	6	
Repetitive Peak Forward Surge Current	I _{FRM}	T _C =25 °C , tp=10ms, Half Sine Wave,	40	A
Non-Repetitive Peak Forward Surge Current	I _{FSM}	T _C =25 °C , tp=10ms, Half Sine Wave,	80	A
Power Dissipation	P _{TOT}	T _C =25°C	30.9	W
		T _C =110°C	13.4	W
Operating Junction and Storage Temperature	T _j · T _{stg}		-55~+175	°C
Mounting Torque		M3 Screw	1	Nm
		6-32 Screw	8.8	lbf-in

Thermal Characteristics						
Parameter	Symbol	Min.	Typ.	Max.	Unit	
Thermal Resistance Junction-Case	R _{θJC}	-	4.85	-	°C/ W	



Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)						
Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	$I_F=6\text{A}, T_J=25\text{ }^\circ\text{C}$	V_F	-	1.4	1.7	V
	$I_F=6\text{A}, T_J=175\text{ }^\circ\text{C}$		-	1.6	2.5	
Reverse Current	$V_R=650\text{V}, T_J=25\text{ }^\circ\text{C}$	I_R	-	10	50	μA
	$V_R=650\text{V}, T_J=175\text{ }^\circ\text{C}$		-	20	100	
Total Capacitive Charge	$V_R=400\text{V}, I_F=5\text{A}, T_J=150\text{ }^\circ\text{C}$	Q_C	-	23	-	nC
Total Capacitive Charge	$V_R=0\text{V}, T_J=25\text{ }^\circ\text{C}, f=1\text{MHz}$	C	-	424	434	pF
	$V_R=200\text{V}, T_J=25\text{ }^\circ\text{C}, f=1\text{MHz}$		-	44	45	
	$V_R=400\text{V}, T_J=25\text{ }^\circ\text{C}, f=1\text{MHz}$		-	42.5	43	

Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

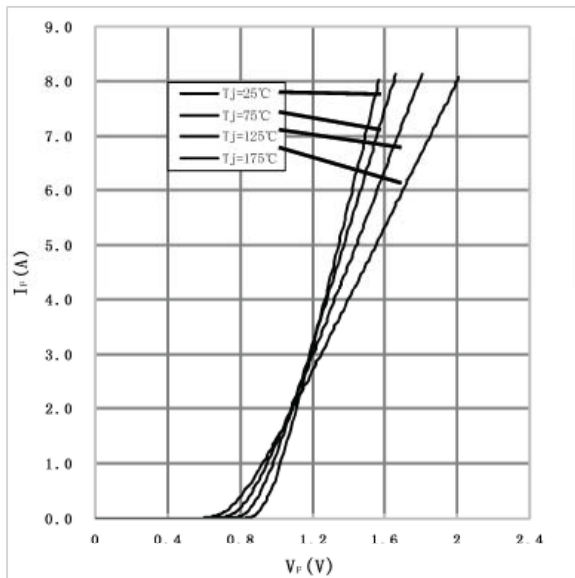


FIG. 2-Typical Reverse Characteristics

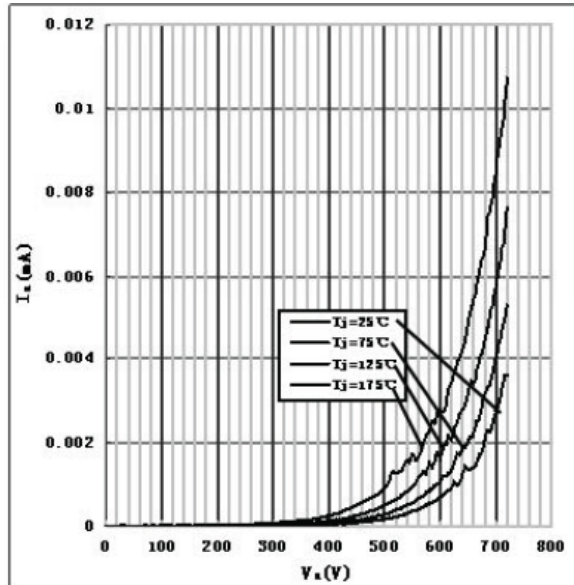


FIG. 3-Typical Forward Current Derating Curve

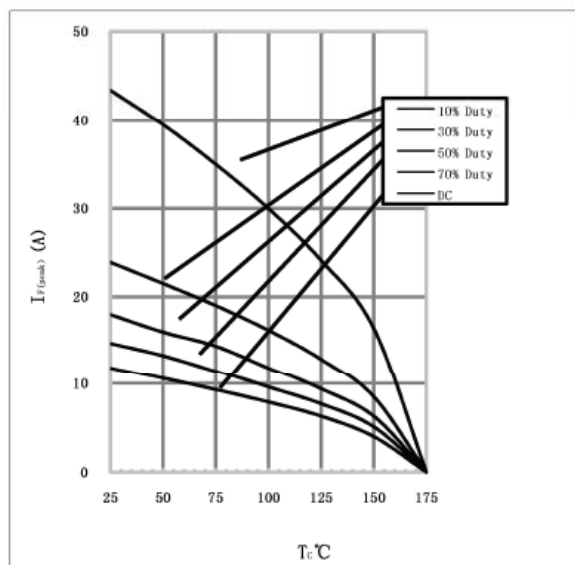
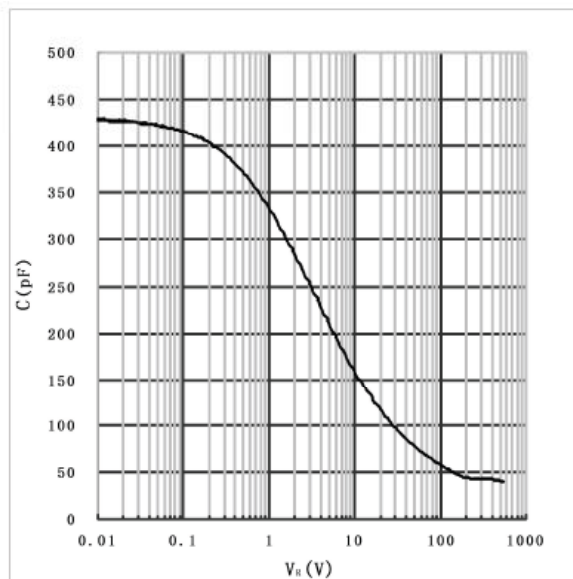
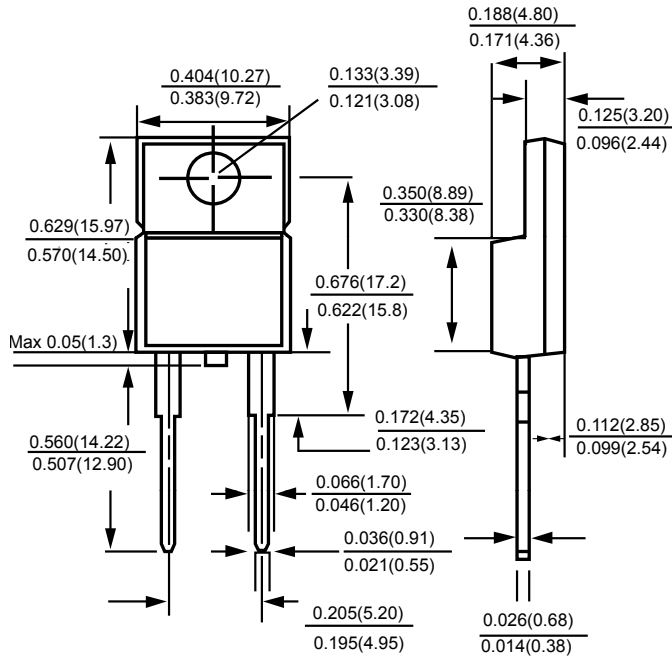


FIG. 4-Typical Junction Capacitance





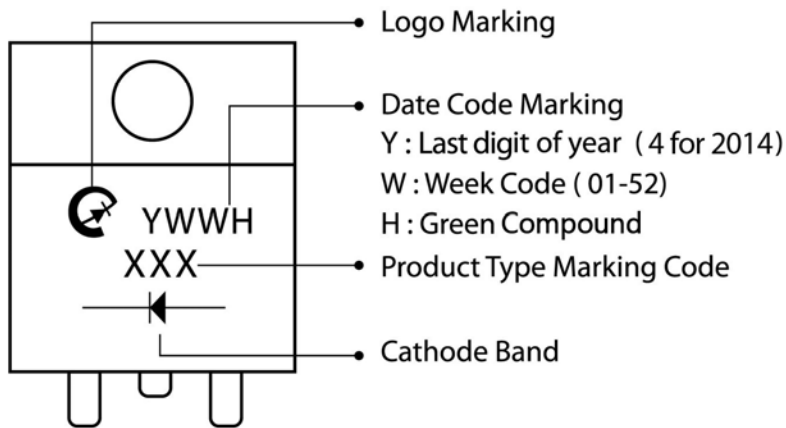
Package Outline Dimensions



ITO-220AC

Dimensions in inches and (millimeters)

Marking Information





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