

RoHS compliant product
A suffix of "-C" specifies halogen free

FEATURES

- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- Positive Temperature Coefficient on V_F
- Temperature-independent Switching
- 175°C Operating Junction Temperature

MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL94V-0 Rate Flame Retardant
- Lead: Lead Solderable per MIL-STD-202 Method 208 Guaranteed
- Polarity: As Marked
- Mounting Position: Any

ITO-220A



APPLICATIONS

- Switch Mode Power Supplies
- Power Factor Correction
- Motor Drive, PV Inverter, Wind Power Station

ORDER INFORMATION

Part Number	Type
SIC10X65F-C	Lead (Pb)-free and Halogen-free



MAXIMUM RATINGS (Rating 25°C Case temperature unless otherwise)

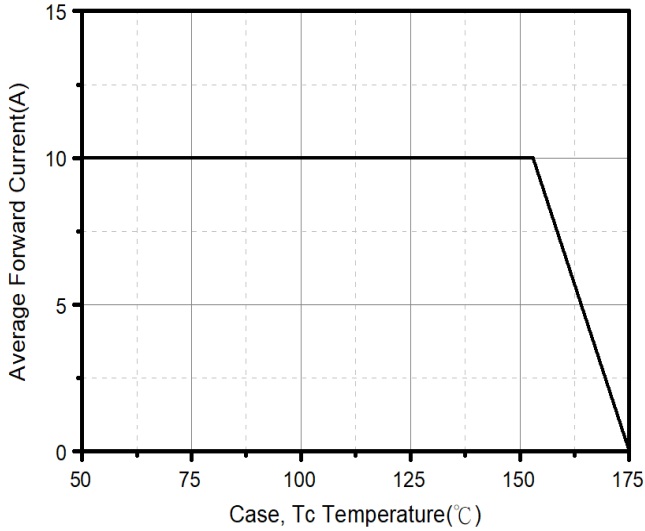
Parameter	Symbol	Rating	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	650	V
Surge Peak Reverse Voltage	V_{RSM}	650	V
DC Blocking Voltage	V_{DC}	650	V
Forward Current	I_F	$T_C \leq 25^\circ\text{C}$	31
		$T_C \leq 135^\circ\text{C}$	14.5
		$T_C \leq 153^\circ\text{C}$	10
Peak Forward Surge Current @8.3ms half sine-wave	I_{FSM}	85	A
Power Dissipation	P_D	42.8	W
Operating Junction & Storage Temperature Range	T_J, T_{STG}	-55~175	°C
Thermal Resistance Ratings			
Typical Thermal Resistance Junction-Ambient	$R_{\theta JA}$	80	°C/W
Typical Thermal Resistance Junction-Case	$R_{\theta JC}$	3.5	

ELECTRICAL CHARACTERISTICS

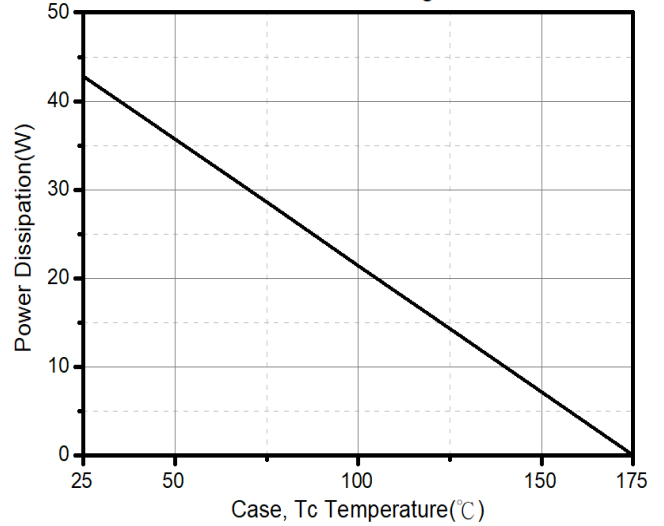
Parameter	Symbol	Typ.	Max.	Unit	Test Conditions
Forward Voltage	V_F	1.4	1.65	V	$I_F=10\text{A}, T_J=25^\circ\text{C}$
		1.75	2.3		$I_F=10\text{A}, T_J=175^\circ\text{C}$
Reverse Current	I_R	0.3	30	μA	$V_R=650\text{V}, T_J=25^\circ\text{C}$
		4	100		$V_R=650\text{V}, T_J=175^\circ\text{C}$
Junction Capacitance	C_J	440	-	pF	$V_R=1\text{V}, T_J=25^\circ\text{C}, f=1\text{MHz}$
Total Capacitive Charge	Q_C	25	-	nC	$V_R=650\text{V}, I_F=10\text{A}, T_J=25^\circ\text{C}, dI/dt=200\text{A}/\mu\text{S}$

CHARACTERISTIC CURVES

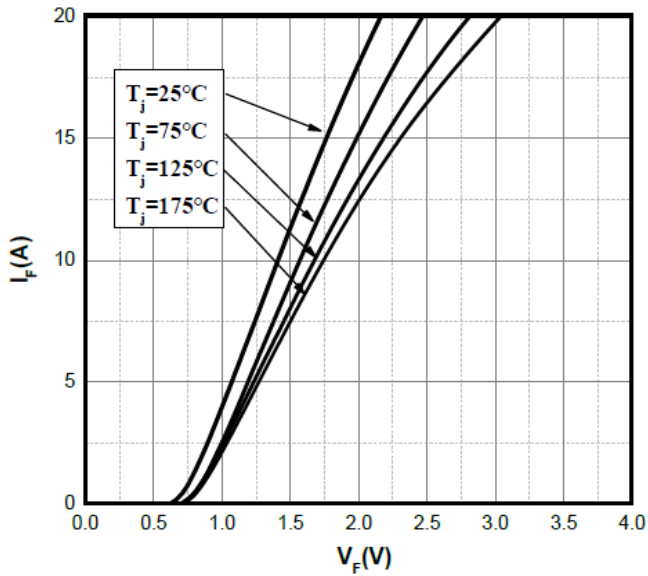
Typical Forward Current Derating Curve



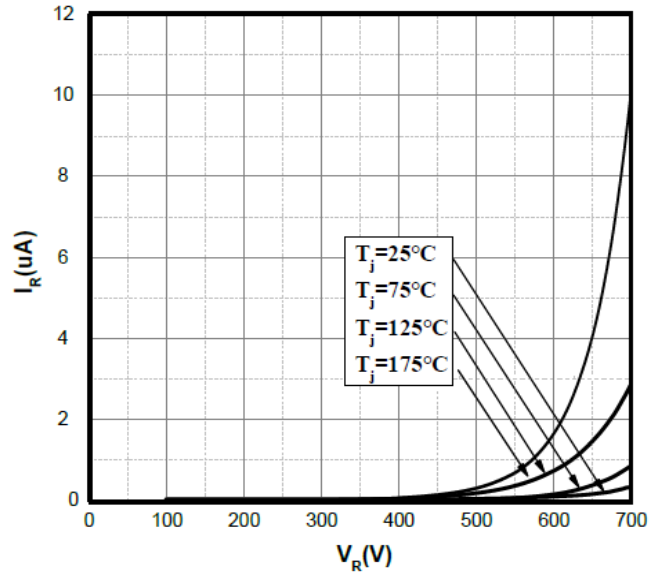
Power Derating



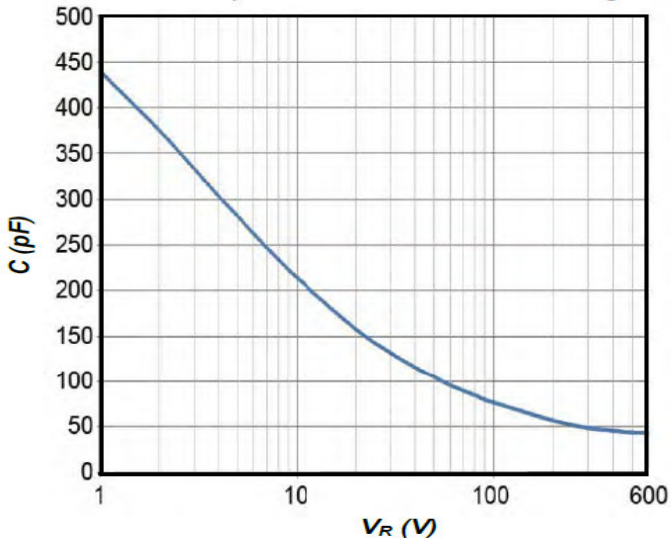
Forward Characteristics



Reverse Characteristics

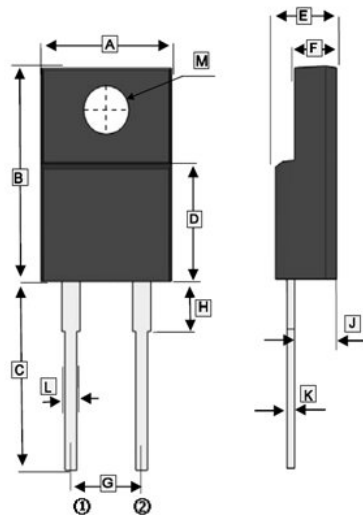


Total Capacitance vs. Reverse Voltage



PACKAGE OUTLINE DIMENSIONS

ITO-220A



REF.	Millimeter	
	Min.	Max.
A	9.50	10.70
B	14.40	15.90
C	12.70	14.20
D	8.40 TYP.	
E	4.20	5.10
F	2.50	3.56
G	3.60	5.90
H	3.30	4.50
J	2.65 TYP.	
K	0.40	0.80
L	0.30	0.90
M	\varnothing 2.60	\varnothing 3.80