Positive temperature coefficient Temperature-independent switching Maximum working temperature at 175 °C Unipolar devices and zero reverse recovery current Zero forward recovery current Essentially no switching losses Reduction of heat sink requirements High-frequency operation Reduction of EMI

Typical applications are in power factor correction(PFC), solar inverter, uninterruptible power supply, motor drives, photovoltaic inverter, electric car and charger.

: ITO-220 : Tin plated leads : As marked

## (T<sub>c</sub>=25 Unless otherwise specified

Device marking code			D112005FG1
Reverse voltage (repetitive peak) @ T <sub>j</sub> =25°C	V <sub>RRM</sub>	V	1200
Reverse voltage (Surge Peak) @ T <sub>j</sub> =25°C	V <sub>RSM</sub>	V	1200
Reverse voltage (DC) V   @ Tj=25°C V	V <sub>DC</sub>	V	1200
Continuous forward current @ Tc=25°C			10
Continuous forward current @ T <sub>c</sub> =125°C	IF	A	5
Continuous forward current @ $T_c=135^{\circ}C$			4.5
Non-repetitive peak forward surge current @ T <sub>c</sub> =25°C, tp=10ms, Half Sine Wave	I <sub>FSM</sub>	A	52
Power Dissipation @ $T_c=25^{\circ}C$	1	W	31
Power Dissipation@ T <sub>c</sub> =110°C	P <sub>TOT</sub>		13
i²t Value@ Tc=25°C ,tp=10ms	i <sup>2</sup> dt	A <sup>2</sup> S	13
Operating junction and Storage temperature range	$T_{j}$ , $T_{stg}$	°C	-55 to +175

₿/C

Forward voltage drop	VF	V	I <sub>F</sub> =5A, T <sub>j</sub> =25°C	1.4	1.57
			I <sub>F</sub> =5A, T <sub>j</sub> =175°C	2.0	-
Reverse leakage current	I <sub>R</sub>		V <sub>R</sub> =1200V, T <sub>j</sub> =25°C	1.8	16
			V <sub>R</sub> =1200V, T <sub>j</sub> =175°C	10	-
Total capacitive charge	Qc	nC	$V_{R}=800V, T_{j}=25^{\circ}C, 0^{VR}C(V)dV$	37	
Total capacitance	С	pF	V <sub>R</sub> =0V, f=1MHZ	410	-
			V <sub>R</sub> =400V, f=1MHZ	35	-
			V <sub>R</sub> =800V, f=1MHZ	27	-
Capacitance Stored Energy	Ec		V <sub>R</sub> =800V	10	-

Ta=25 Unless otherwise specified

Thermal resistance	R <sub>-c</sub>	°CW	4.8

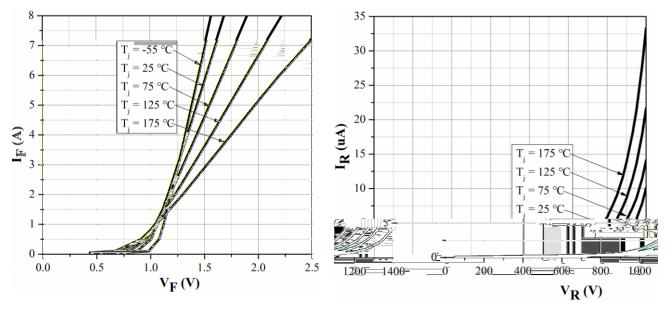


Figure 1. Forward Characteristics

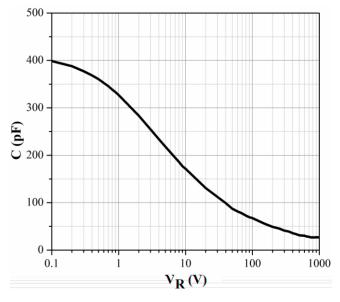
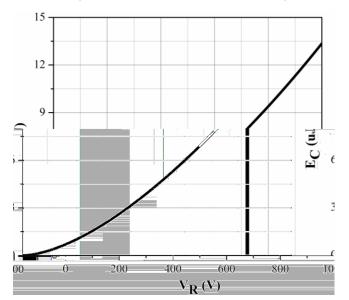
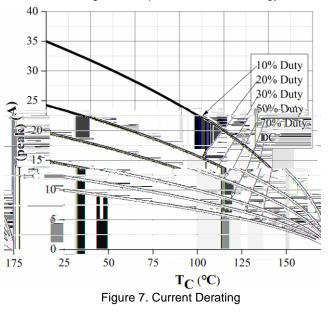


Figure 3. Capacitance vs. Reverse Voltage







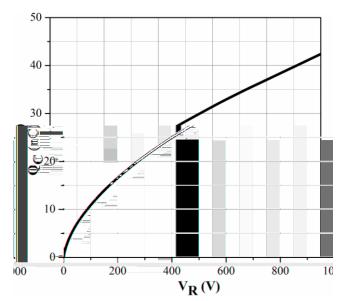


Figure 4. Total Capacitance Charge vs. Reverse Voltage

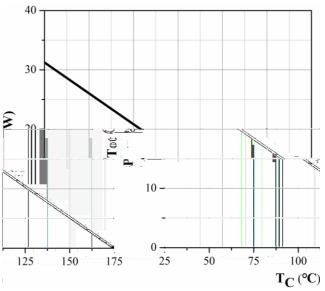
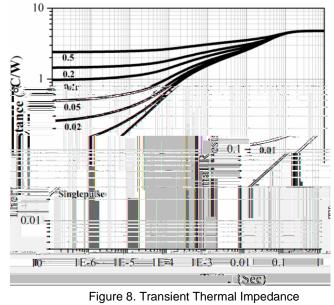


Figure 6. Power Derating



3/5

Yangzhou Yangjie Electronic Technology Co., Ltd.

	LIHI A	220AC 10:2 2:75 3:45 15:25 90.41 0:45 0:45		4.97		
			к	2:5	2=/4	
Dimensions	s in⊫millimeters	F	M	1.03	1.43	I

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.frxelec.com, or consult your nearest Yan