V <sub>RRM</sub>	1200V
I <sub>F 125℃</sub>	5A
Qc	37nC



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	$V_{RSM}$	V	1200
Reverse voltage (DC) @ T <sub>j</sub> =25°C	V <sub>DC</sub>	V	1200
Continuous forward current @ T <sub>c</sub> =25°C			10
Continuous forward current @ T <sub>c</sub> =125°C	I <sub>F</sub>	А	5
Continuous forward current @ $T_c=135^{\circ}C$			4.5
Non-repetitive peak forward surge current @ $T_c=25^{\circ}C$ , tp=10ms, Half Sine Wave	I <sub>FSM</sub>	А	52
Power Dissipation@ T <sub>c</sub> =25°C		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

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>	°C W	4.8

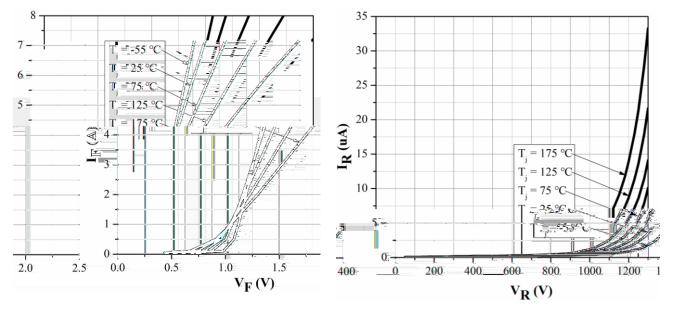


Figure 1. Forward Characteristics

Figure 2. Reverse Characteristic

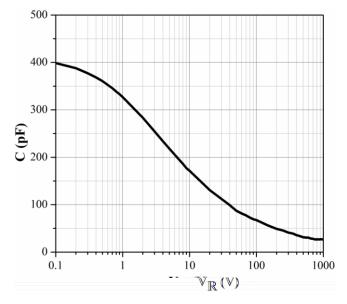
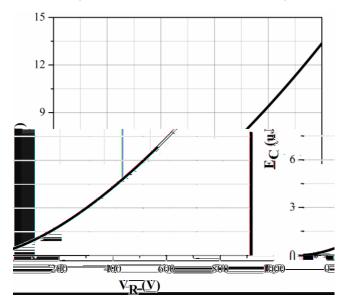
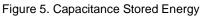
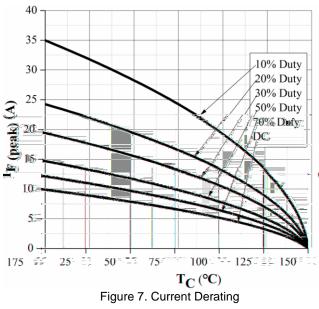


Figure 3. Capacitance vs. Reverse Voltage







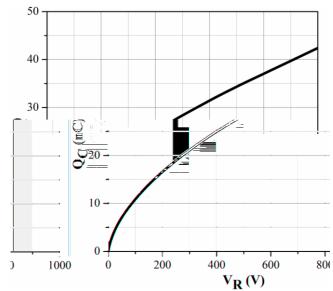


Figure 4. Total Capacitance Charge vs. Reverse Voltage

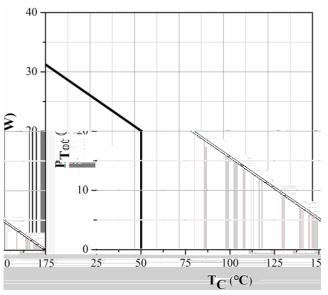


Figure 6. Power Derating

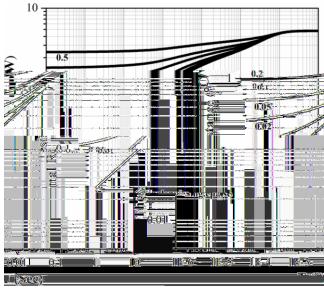
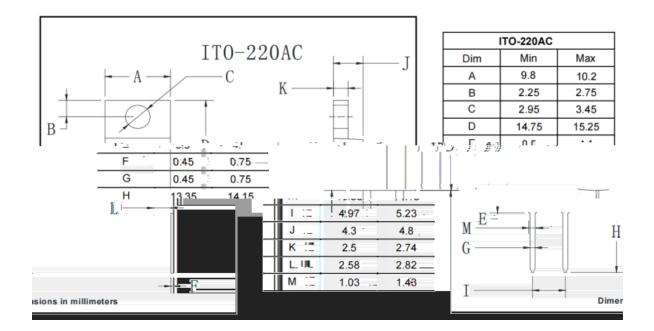


Figure 8. Transient Thermal Impedance

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