

### G cb UVXYG clh m cXY

### YUhi Yg

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

#### Hmd U 5 dd Uhcbg

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

#### AY Ub U UHJ

**DU U Y**: ITO-220

HY a bUg: Tin plated leads

Dc U hm As marked

## AU a i a FUhb g ( $T_c$ =25 Unless otherwise specified

D5F5AH H F	GMA C	IBH	J5 I
Device marking code			D112005FG1
Reverse voltage (repetitive peak) @ T <sub>j</sub> =25°C	$V_{RRM}$	V	1200
Reverse voltage (Surge Peak) @ T <sub>i</sub> =25°C	$V_{RSM}$	V	1200
Reverse voltage (DC) @ T <sub>j</sub> =25°C	$V_{DC}$	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>	Α	5
Continuous forward current @ T <sub>c</sub> =135°C			4.5
Non-repetitive peak forward surge current @ T <sub>c</sub> =25°C, tp=10ms, Half Sine Wave	I <sub>FSM</sub>	А	52
Power Dissipation@ T <sub>c</sub> =25°C			31
Power Dissipation@ T <sub>c</sub> =110°C	P <sub>TOT</sub>	VV	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



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D5F5 AH H F	GMA C	IBH	н GH СВ НСВG	Hmd	AU
Forward voltage drop	V <sub>F</sub>	٧	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	-

H YaU UUhY gh g Ta=25 Unless otherwise specified

D5F5A H F	GMA C	IBH	J5 I
Thermal resistance	R <sub>-C</sub>	°C W	4.8

## Hmd U UUhYgh g

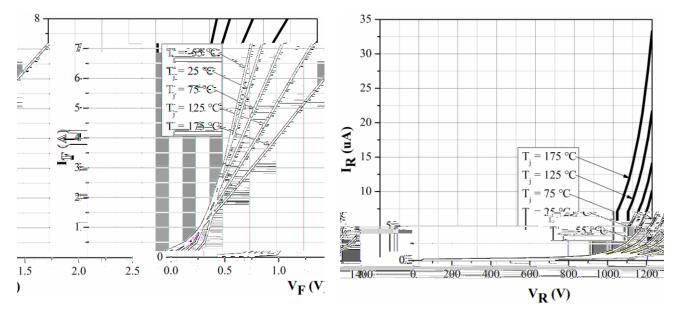


Figure 1. Forward Characteristics

Figure 2. Reverse Characteristic



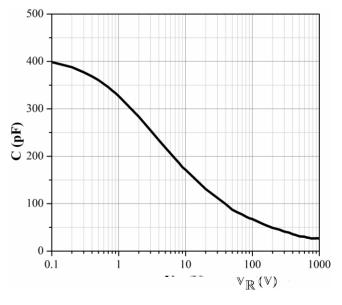


Figure 3. Capacitance vs. Reverse Voltage

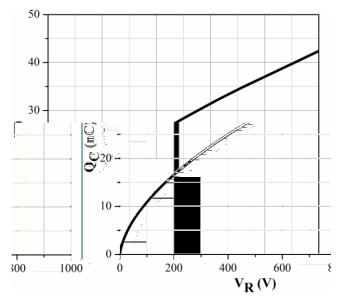


Figure 4. Total Capacitance Charge vs. Reverse Voltage

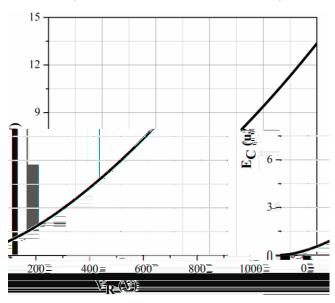


Figure 5. Capacitance Stored Energy

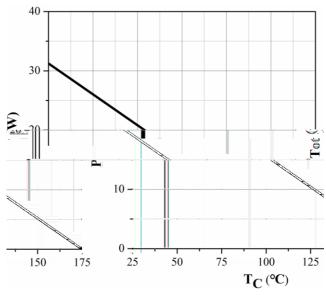


Figure 6. Power Derating

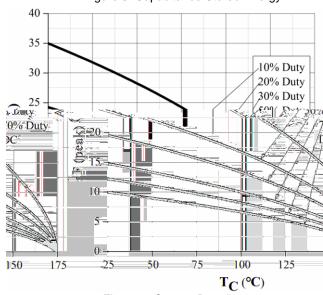


Figure 7. Current Derating

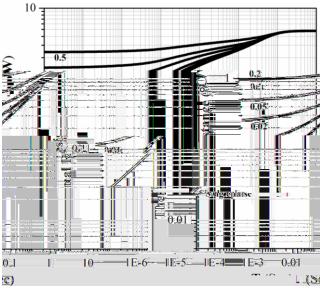
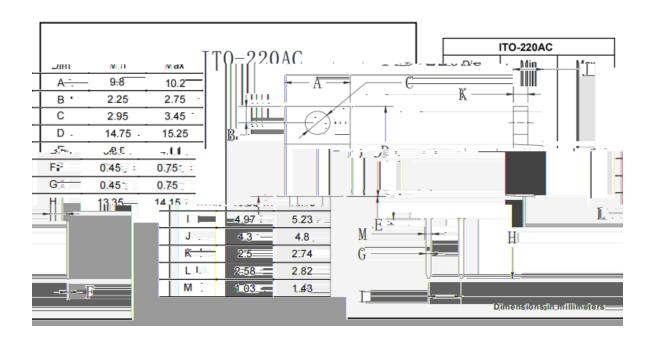


Figure 8. Transient Thermal Impedance

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