

YJD106510FQG2

Typical Applications

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

Mechanical Data

Package: ITO-220AC

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

Terminals: Tin plated leads

Polarity: As marked

Maximum Ratings ($T_c=25$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Device marking code			D106510FQG2
Reverse voltage (repetitive peak) @ $T_j=25^{\circ}\text{C}$	V_{RRM}	V	650
Reverse voltage (Surge Peak) @ $T_j=25^{\circ}\text{C}$	V_{RSM}	V	650
Reverse voltage (DC) @ $T_j=25^{\circ}\text{C}$	V_{DC}	V	650
Continuous forward current @ $T_c=25^{\circ}\text{C}$	I_F	A	16
Continuous forward current @ $T_c=110^{\circ}\text{C}$			10
Power Dissipation @ $T_c=110^{\circ}\text{C}$			19
i^2t Value @ $T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$	i^2t	A^2S	32
Operating junction and Storage temperature range	T_j, T_{stg}	$^{\circ}\text{C}$	-55 to +175



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Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Typ.	Max.
Forward voltage drop	V_F	V	$I_F=10A, T_J=25^{\circ}C$	1.35	1.55
			$I_F=10A, T_J=175^{\circ}C$	1.8	-
Reverse leakage current	I_R	μA	$V_R=650V, T_J=25^{\circ}C$	0.5	25
			$V_R=650V, T_J=175^{\circ}C$	2	-
Total capacitive charge	Q_C	nC	$V_R=400V, T_J=25^{\circ}C, Q_C=\int_0^{V_R} I_C(V)dV$	30	-
Total capacitance	C	μF	$V_R=0V, f=1MHz$	543	-
			$V_R=200V, f=1MHz$	55	-
			$V_R=400V, f=1MHz$	52	-
Capacitance Stored Energy	E_C	μJ	$V_R=400V$	3.7	-

Thermal Characteristics ($T_a=25$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Value
Thermal resistance	R_{J-C}	$^{\circ}C/W$	3.5

Typical Characteristics



Figure 1. Forward Characteristics



Figure 2. Reverse Characteristic

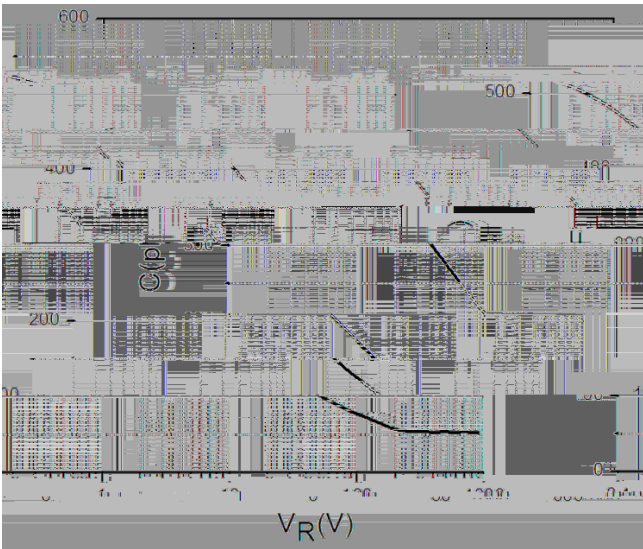


Figure 3. Capacitance vs. Reverse Voltage

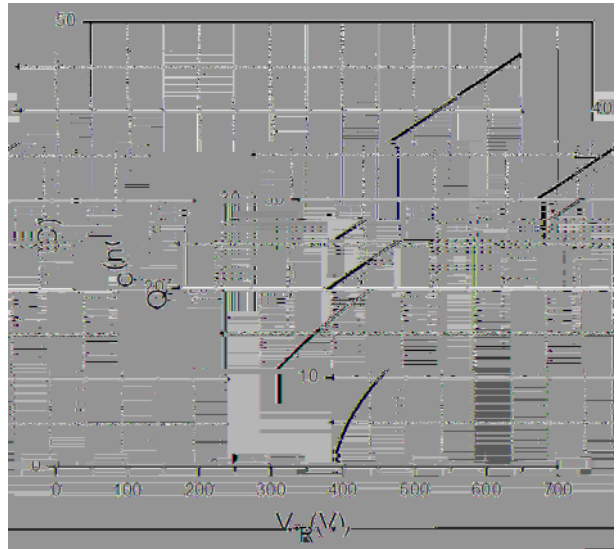


Figure 4. Total Capacitance Charge vs. Reverse Voltage

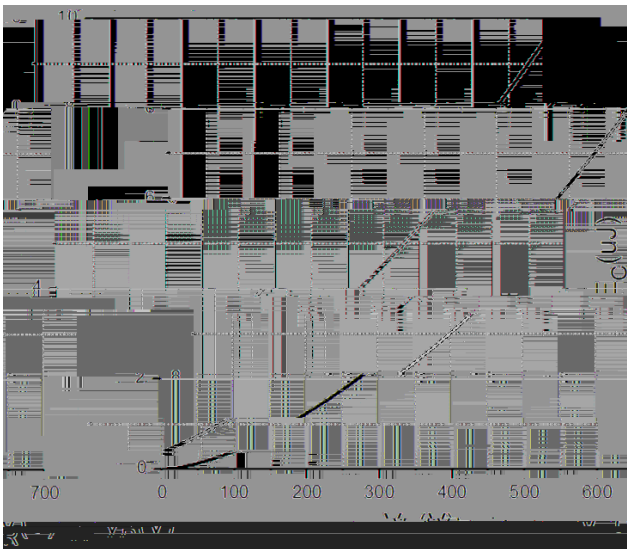


Figure 5. Capacitance Stored Energy

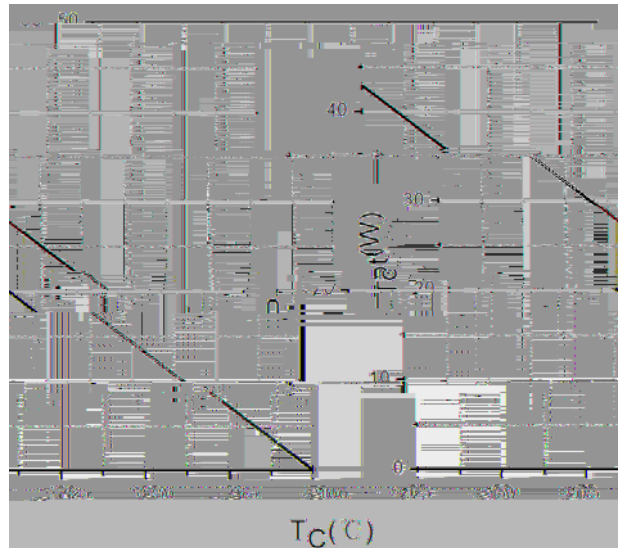


Figure 6. Power Derating

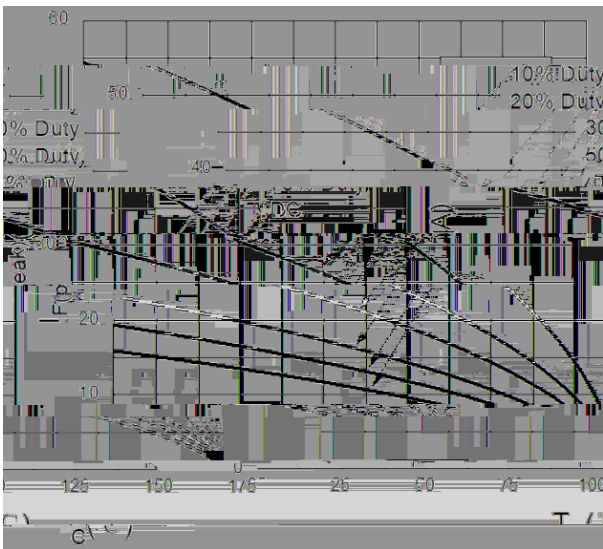


Figure 7. Current Derating

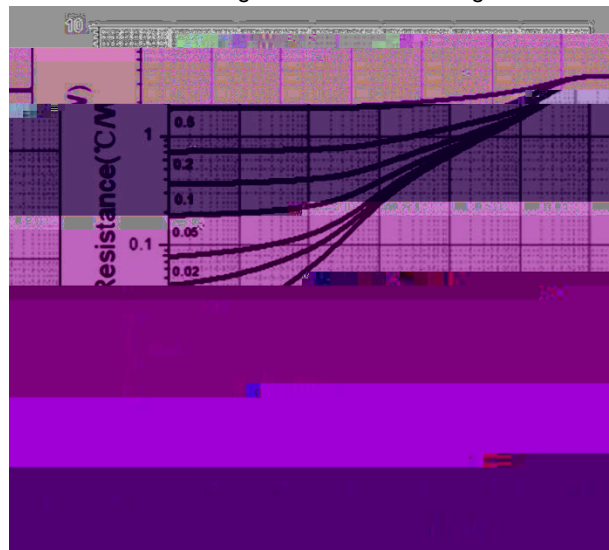


Figure 8. Transient Thermal Impedance



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