

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: TO-247AC

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)

PARAMTETER	SYMBOL	UNIT	VALUE
Device marking code			D106550NQG3
Reverse voltage (rep	E	°sNI	h Cl A Æ
$T_j=25^{\circ}\text{C}$	V_{DC}	V	650
Continuous forward current @ $T_c=25^{\circ}\text{C}$			
Continuous forward current @ $T_c=143^{\circ}\text{C}$			454
			50 W
Power Dissipation @ $T_c=110^{\circ}\text{C}$			196
i^2t Value @ $T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$	i^2dt	A ² S	722
Operating junction and Storage temperature range	T_j, T_{stg}	°C	-55 to +175



YJD106550NQG3

Electrical Characteristics (Per Leg)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Typ.	Max.
Forward voltage drop	V_F	V	$I_F=50A, T_J=25^{\circ}C$	1.45	1.6
			$I_F=50A, T_J=175^{\circ}C$	1.9	-
Reverse leakage current	I_R	μA	$V_R=650V, T_J=25^{\circ}C$	3	25
			$V_R=650V, T_J=175^{\circ}C$	20	-
Total capacitive charge	Q_C	nC	$V_R=400V, T_J=25^{\circ}C, Q_C=\int_0^{V_R} I_C(V)dV$	135.3	-
Total capacitance	C	pF	$V_R=0V, f=1MHZ$	2453	-
			$V_R=200V, f=1MHZ$	247	-
			$V_R=400V, f=1MHZ$	243	-
Capacitance Stored Energy	E_C	μJ	$V_R=400V$	16.5	-

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

PARAMETER	SYMBOL	UNIT	Value
Thermal resistance	R_{J-C}	$^{\circ}C/W$	0.33

Typical Characteristics

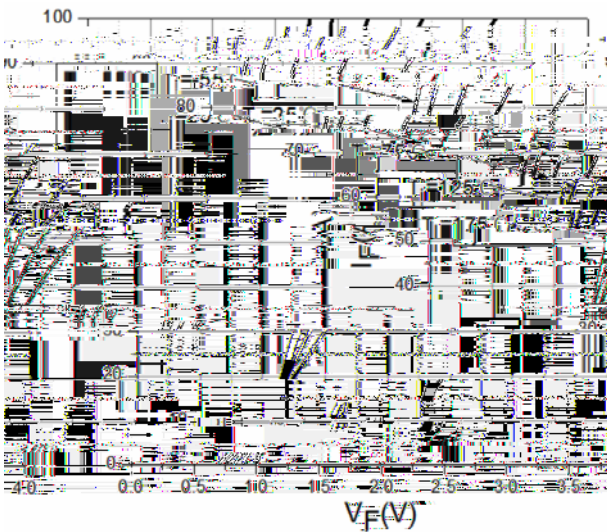


Figure 1. Forward Characteristics

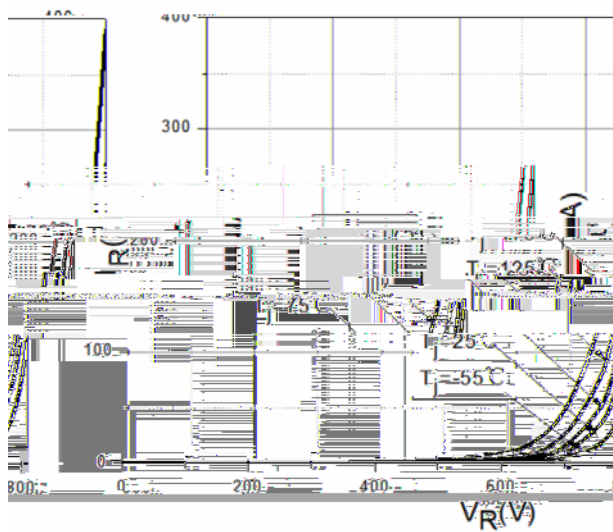


Figure2. Reverse Characteristic

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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 which 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.

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