

### 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<sub>C</sub>=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 @ $T_c=143^{\circ}\text{C}$			50
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 <sup>2</sup> 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	$I_R$	$\mu A$	$V_R=650V, T_J=25^{\circ}C$	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	$E_C$	$\mu J$	$V_R=400V$	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

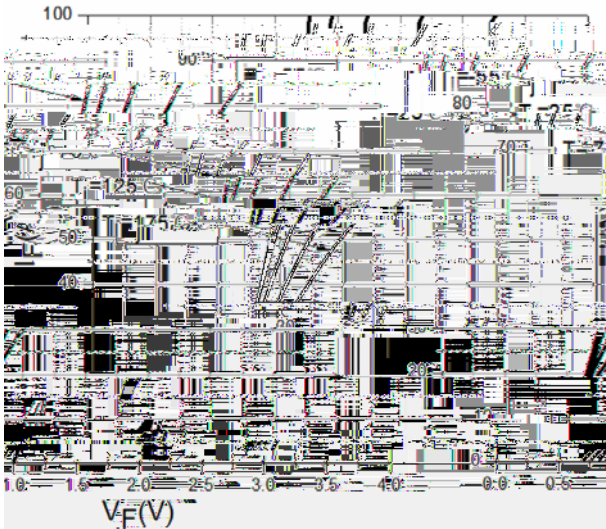


Figure 1. Forward Characteristics

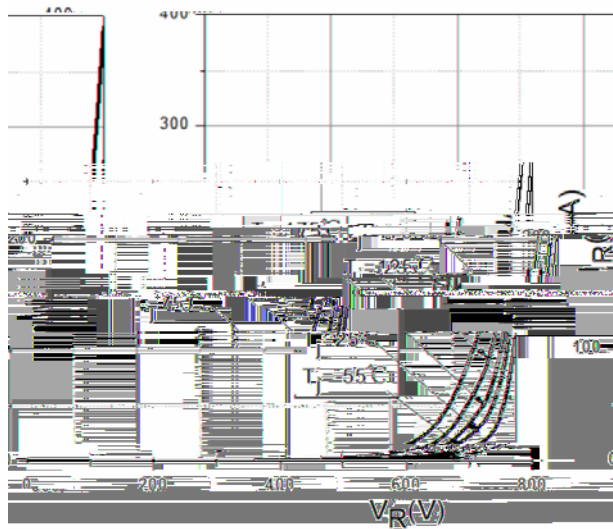


Figure2. Reverse Characteristic



**YJD106550NQG3**



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