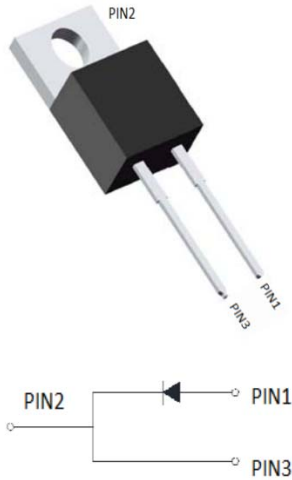


V_{RRM}	650V
I_F (135°C)	24A
Q_C	62nC

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.

: TO-220AC

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

: Tin plated leads

: As marked

($T_C=25^\circ\text{C}$ Unless otherwise specified)

Device marking code			D106520PQG2
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	53
Continuous forward current @ $T_c=135^\circ\text{C}$			24
Continuous forward current @ $T_c=145^\circ\text{C}$			20
Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$, Half Sine Wave	I_{FSM}	A	160
Power Dissipation @ $T_c=25^\circ\text{C}$	P_{TOT}	W	170
Power Dissipation @ $T_c=110^\circ\text{C}$			74
i^2t Value @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$	i^2t	A^2S	128
Operating junction and Storage temperature range	T_j, T_{stg}	$^\circ\text{C}$	-55 to +175



Forward voltage drop	V_F	V	$I_F=20A, T_J=25^\circ C$	1.35	1.55
			$I_F=20A, T_J=175^\circ C$	1.75	-
Reverse leakage current	I_R	μA	$V_R=650V, T_J=25^\circ C$	1	25
			$V_R=650V, T_J=175^\circ C$	5	-
Total capacitive charge	Q_C	nC	$V_R=400V, T_J=25^\circ C, Q_C=\int_0^{V_R} I_C(V)dV$	62	-
Total capacitance	C	μF	$V_R=0V, f=1MHz$	1157	-
			$V_R=200V, f=1MHz$	115.6	-
			$V_R=400V, f=1MHz$	107	-
Capacitance Stored Energy	E_C	μJ	$V_R=400V$	7.8	-

($T_a=25^\circ C$ Unless otherwise specified)

Thermal resistance	R_{J-C}	$^\circ C/W$	0.88

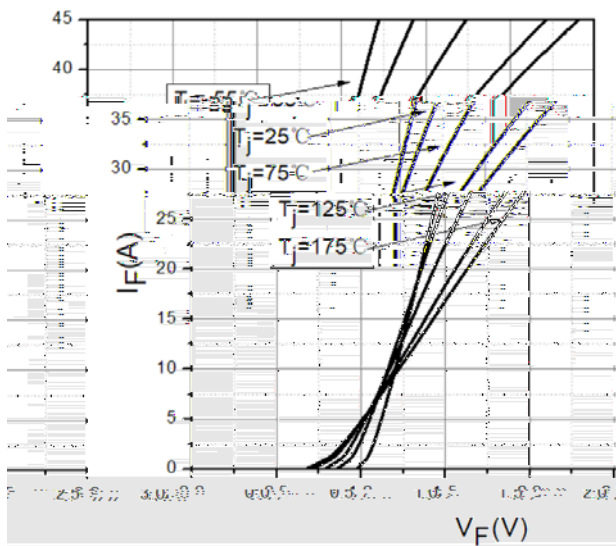


Figure 1. Forward Characteristics

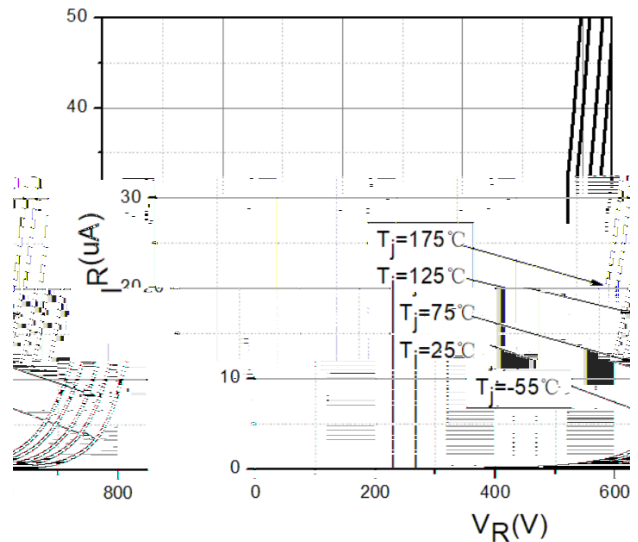
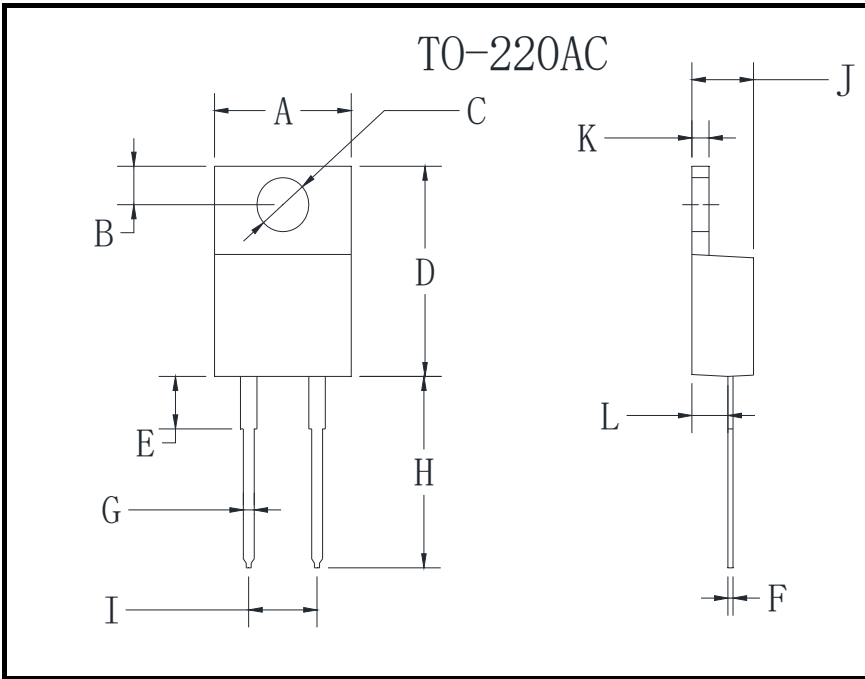


Figure 2. Reverse Characteristic





Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.75	4.05
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.3	13.9
I	4.86	5.26
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79



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