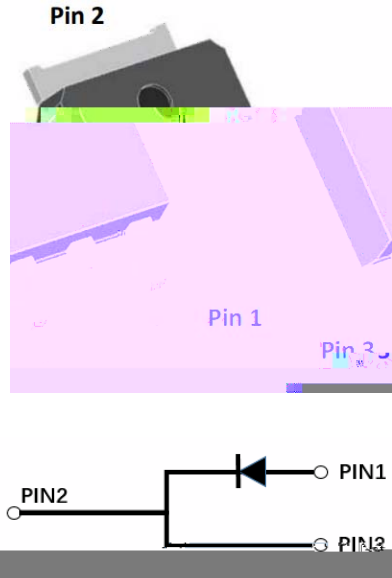


Silicon Carbide Schottky Diode

V_{RRM}	650V
I_F 135°C	3.5A
Q_C	5.2nC



Features

- Positive temperature coefficient
- Temperature-independent switching
- Maximum working temperature at 175 °C
- Unipolar devices and zero reverse recovery current
- Zero forward recovery voltage
- Essentially no switching losses
- Reduction of heat sink requirements
- AEC-Q101 qualified
- High-frequency operation
- Reduction of EMI

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-252
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)

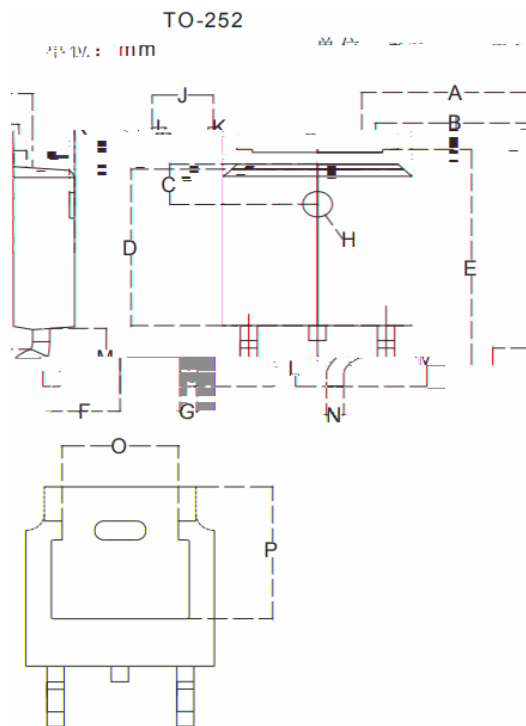
PARAMETER	SYMBOL	UNIT	VALUE
Device marking code			D106502DQG3
Reverse voltage (repetitive peak) @ $T_j=25^\circ\text{C}$	V_{RRM}	V	650
Reverse voltage (Surge Peak) @ $T_j=25^\circ\text{C}$	V_{RSM}	V	650
Reverse voltage (DC) @ $T_j=25^\circ\text{C}$	V_{DC}	V	650
Continuous forward current @ $T_c=25^\circ\text{C}$	I_F	A	7.2
Continuous forward current @ $T_c=135^\circ\text{C}$			3.5
Continuous forward current @ $T_c=160^\circ\text{C}$			2
Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$, Half Sine Wave	I_{FSM}	A	20
Power Dissipation@ $T_c=25^\circ\text{C}$	P_{TOT}	W	42
Power Dissipation@ $T_c=110^\circ\text{C}$			18
i^2t Value@ $T_c=25^\circ\text{C}$, $t_p=10\text{ms}$	$\int i^2 dt$	A^2S	2
Operating junction and Storage temperature range	T_j, T_{stg}	$^\circ\text{C}$	-55 to +175



■Electrical Characteristics



■Outline Dimensions



TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.200	6.000
E	10.400	10.000
F	2.366	2.166
G	0.860	0.660
H	$\Phi 1.050$	$\Phi 1.350$
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.700	2.280
N	0.580	0.430
O	4.95	4.20
P	4.5	5.4



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