



## Silicon Carbide Schottky Diode

$V_{RRM}$	650V
0 9 V . t . o . i . . . O . I . F . 1 . 8 . 5 . V . t . • 6 . S . Y . 0 . S . . . 3 . V . : . 3 . "	

### 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
- 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-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			D106508PQG2
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	30
Continuous forward current @ $T_c=135^\circ\text{C}$			14
Continuous forward current @ $T_c=158^\circ\text{C}$			8
Non-repetitive peak forward surge current @ $T_c=25^\circ\text{C}$ , $t_p=10\text{ms}$ , Half Sine Wave	$I_{FSM}$	A	70
Power Dissipation @ $T_c=25^\circ\text{C}$	$P_{TOT}$	W	136
Power Dissipation @ $T_c=110^\circ\text{C}$			59
$i^2t$ Value @ $T_c=25^\circ\text{C}$ , $t_p=10\text{ms}$	$i^2t$	$\text{A}^2\text{S}$	24
Operating junction and Storage temperature range	$T_j, T_{stg}$	$^\circ\text{C}$	-55 to +175



## YJD106508PQG2

### Electrical Characteristics

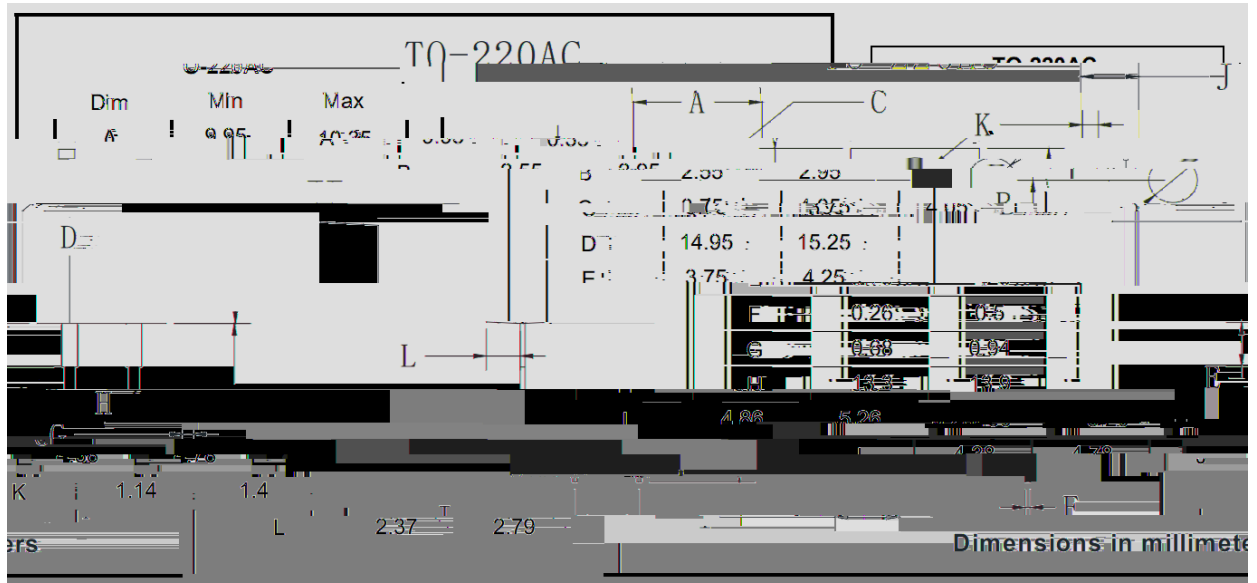
PARAMTETER	SYMBOL	UNIT	TEST CONDITIONS	Typ.	Max.
Forward voltage drop	$V_F$	V	$I_F=8A, T_j=25^{\circ}C$	1.3	1.55
			$I_F=8A, T_j=175^{\circ}C$	1.6	-
Reverse leakage current	$I_R$	$\mu A$	$V_R=650V, T_j$		





# YJD106508PQG2

## Outline Dimensions



'LVFODLPHU

7KH LQIRUPDQWRIC \$ QHWKLV GRFXPHQW<DQJRKUR XHIDQJHQZHHF(ROHFOVRUR Q&RF /VHG UHV  
ULJKW WR PDNH FKD QJHRU ZW WIK R/XSMIKHRSVLRG XRF Q V R IGWV SFOUARIYGHKUHUCILDEWQGMV L J XQ F  
RU RWKHUZLVH

7KH SURGXFW OLVVJCH G HWRI LEH LXV B G VZH FWKURRQG IEQHTUXLS PHQW RU GHYLFHWWKDQG Q  
HTXLSPHQW RU GHYLLFHH KIZJKL FKH VHHORW K H PLDDEIXOLFWML B Q X B G QGLEDJHFHUK XPFKQDOLIH  
PHGLFDO LQVWUXPHRQV HT XLSRQWSSRUFHMDUFAK LQXFOH DU UHDFVXHUO FFROUWURROOHUW D Q  
GHYLFHV <DQJMLHW R LE HDIDR Q HDR/Q XLP H O LQRI B H V S IRDE/LCEL W/H V R O VDIQQ JGIDJRPJMMFK LP  
RI VDOH

7KLV SXEOLFDWLR G SVXSSHHW HDGVLQURQAPDXLSRQL H G HYRUR XDGGLRQL FSOOHD V B WRHJPLW R X  
KWVZZ \DQJMLHRFRPRQVXOW \RXUJ Q H/DUOHWWR & DLGJMLR W D Q B W KHU D