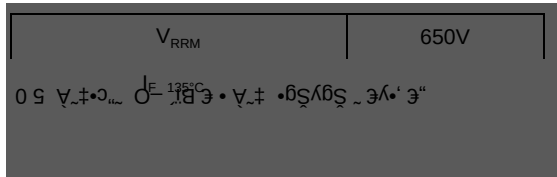


Silicon Carbide Schottky Diode



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)

PARAMTETER	SYMBOL	UNIT	VALUE
Device marking code			D106508PQG2
Reverse voltage (repetitive peak) @ T _J =25°C	V _{RRM}	V	650
Reverse voltage (Surge Peak) @ T _J =25°C	V _{RSM}	V	650
Reverse voltage (DC) @ T _J =25°C	V _{DC}	V	650
Continuous forward current @ T _c =25°C	I _F	A	30
Continuous forward current @ T _c =135°C			14
Continuous forward current @ T _c =158°C			8
Non-repetitive peak forward surge current @ T _c =25°C, tp=10ms, Half Sine Wave	I _{FSM}	A	70
Power Dissipation@ T _c =25°C	P _{TOT}	W	136
Power Dissipation@ T _c =110°C			59
i ² t Value@ T _c =25°C ,tp=10ms	∫i ² dt	A ² S	24
Operating junction and Storage temperature range	T _J ,T _{stg}	°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	μA	$V_R=650V, T_J$		



■Outline Dimensions



'LVFODLPHU

7KH LQIRUPDQWRIG \$QHWKLV GRFXPHQW<DQJ]KR XHIDQJHQZHHF(RQH)OVUR Q&F /VHG UHV
ULJKW WR PDNH FKDQJHUV ZW WIK R/XSM KHRVLRG XRF Q V RIGVV SPSURIGHKUHUGILQEWG LVL JXQ F
RU RWKHU ZLVH

7KH SURGXFW OLVWJQH GHWRILEQLXW B GHVH WKURUQGEQHTXLSPHQW RU GHYLFH WKDQG Q
HTXLSPHQW RU GHYILUHH KIZJKL FKH VHHORW KH PLDDIIXQLWML RQXRI QGLDQJHWO K XPFKQDVLH
PHGLFDO LQVWUXPHQV ITXLSRQSRFHMDUAKQQFOH DU UHDFWKHU FFRQWURROOHU V DQ
GHYLFHV <DQJMLHWR UHIDQDQHDVQ XLP H O LQRI RUVSIRQELQEL WHVRO VDIQQJGIDRDPJMMFK LP
RI VDOH

7KLV SXEOLFDWLREI SVDSSHUW IDGIDLQURUPDVLSPQLSGHYRUR XDGGLRQLFSQDHOVLQWRHVLW RX
KW VZZ \DQJMLHRRRPRQVXOW \RXHUQ HVDUHHWWR+DLQJMLRWDQJWKHU D