

UJ2D1205F5

SILICON CARBIDE SCHOTTKY DIODE

REVERSE VOLTAGE – 1200 Volts
FORWARD CURRENT – 5 Amperes

FEATURES

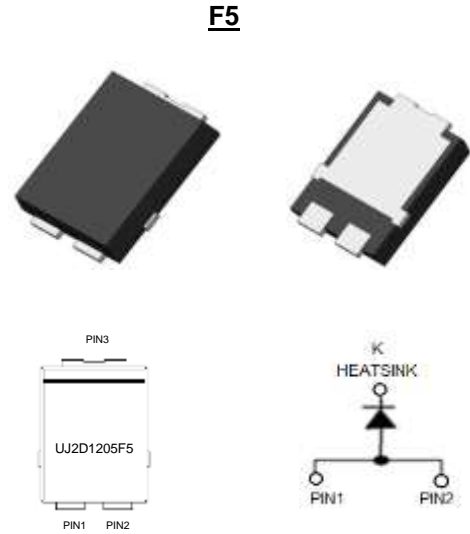
- 1200 Volt Schottky Rectifier
- High-Frequency Operation
- Low reverse current

APPLICATION

- Switch mode Power Supplies
- Power Factor correction

MECHANICAL DATA

- Case: F5-PAK molded plastic
- Case Material: “Green” molding compound, UL Flammability classification 94V-0,(No Br. SB. Cl.) “Halogen-free”.
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.989 grams (Approximate)
- Marking code: UJ2D1205F5



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|------------------------------------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 1200 | V |
| Maximum DC blocking voltage | V_{DC} | 1200 | V |
| Maximum Average rectified output current | @ $T_C=TBD^{\circ}C$ $I_{(AV)}$ | 5 | A |
| Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load. | I_{FSM} | 40 | A |
| Single Pulse Avalanche Energy (Note 4) | @ $L=10mH$ EAS | 44 | mJ |
| Operating junction and Storage Temperature range | T_J, T_{STG} | -55 ~ +175 | °C |

STATIC ELECTRICAL CHARACTERISTICS

| PARAMETER | TEST CONDITIONS | SYMBOL | TYP | MAX | UNIT |
|---------------------------------------|--|--------|----------|------------|------|
| Forward voltage (Note1) | $I_F=5A$ $T_J=25^{\circ}C$ $T_J=175^{\circ}C$ | V_F | -- -- | 1.7 3.0 | V |
| Leakage current | $V_R=1200V$ $T_J=25^{\circ}C$ $T_J=175^{\circ}C$ | I_R | -- -- | 190 600 | uA |
| Typical junction capacitance (Note 2) | | C_J | | 260(TBD) | pF |

DYNAMIC ELECTRICAL CHARACTERISTICS

| PARAMETER | TEST CONDITIONS | SYMBOL | MAX | UNIT |
|--------------------------|------------------------------------|----------|-----|------|
| Reverse recovery charges | $V_R=600V, dl/dt= 250A/uS, I_F=5A$ | Q_{rr} | 14 | nC |

THERMAL CHARACTERISTICS

| PARAMETER | SYMBOL | TYP | UNIT |
|-------------------------------------|--------------------------|------------|------|
| Typical thermal resistance (Note 3) | R_{thJc} R_{thJL} | TBD TBD | °C/W |

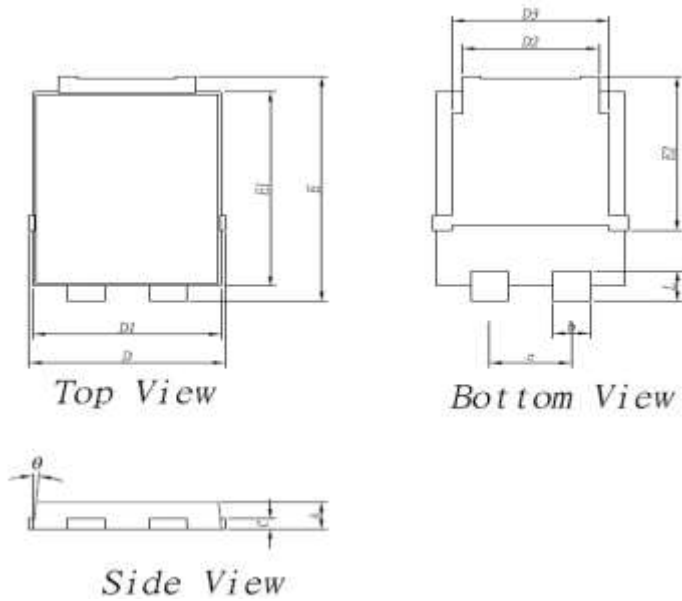
Note :

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 1.0VDC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) $I_{PK}=2.9A, V_{DB}=100V, T_J=25^{\circ}C$

REV.Pre-0 , Jun-2016, TBD

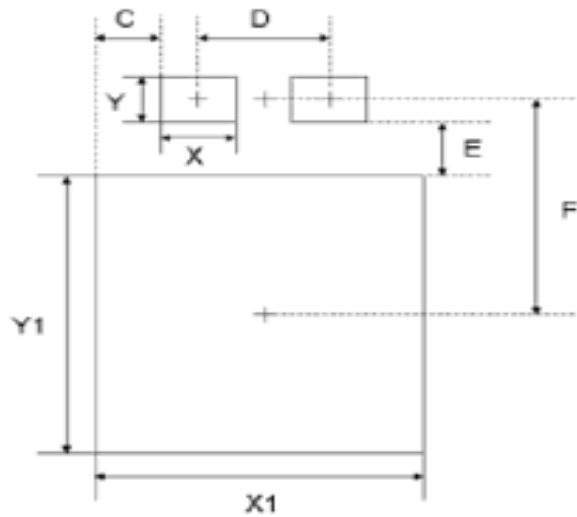
MECHANICAL AND MARKING INFORMATION
UJ2D1205F5

Package Dimension :



| F5 | | | |
|-----------------------------|-----------|-------|-------|
| DIM. | MIN. | TYP. | MAX |
| A | 1.60 | 1.80 | 2.00 |
| b | 1.80 | 2.00 | 2.30 |
| C | -- | 0.70 | -- |
| D | -- | 10.40 | -- |
| D1 | 9.80 | 10.00 | 10.30 |
| D2 | 7.00 | 7.25 | 7.50 |
| D3 | 8.10 | 8.35 | 8.60 |
| E | 14.50 | 15.00 | 15.50 |
| E1 | 12.70 | 13.00 | 13.30 |
| E2 | 10.00 | 10.25 | 10.60 |
| e | 4.35 REF. | | |
| L | 1.70 | 2.00 | 2.30 |
| θ | -- | -- | 5° |
| All dimension in millimeter | | | |

SUGGESTED PAD LAYOUT :



| F5 | | |
|------|------------|---------|
| DIM. | Millimeter | Inches. |
| C | 2.00 | 0.079 |
| D | 4.35 | 0.171 |
| E | 1.60 | 0.063 |
| F | 8.70 | 0.343 |
| X | 3.00 | 0.118 |
| X1 | 11.40 | 0.449 |
| Y | 3.00 | 0.118 |
| Y1 | 11.25 | 0.443 |