

# UJD06508F5

## SILICON CARBIDE SCHOTTKY DIODE

**REVERSE VOLTAGE** – 650 Volts  
**FORWARD CURRENT** – 8 Amperes

### FEATURES

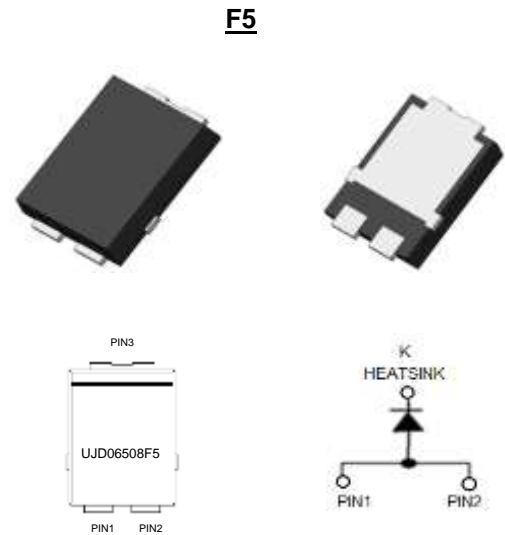
- 650 Volt Schottky Rectifier
- High-Frequency Operation
- Low reverse current

### 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”.
- Lead free finish, RoHS compliant
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.989 grams (Approximate)
- Marking code: UJD06508F5



## 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	$V_{RRM}$	650	V
Maximum DC blocking voltage	$V_{DC}$	650	V
Maximum Average rectified output current	$I_{(AV)}$	8	A
Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load.	$I_{FSM}$	48	A
Single Pulse Avalanche Energy ( Note 4)	EAS	67	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)	$I_F=8A$ $T_J=25^\circ C$ $T_J=175^\circ C$	$V_F$	-- --	1.70 2.25	V
Leakage current	$V_R=650V$ $T_J=25^\circ C$ $T_J=175^\circ C$	$I_R$	-- --	230 700	uA
Typical junction capacitance (Note 2)		$C_J$		260(TBD)	pF

### DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Reverse recovery charges	$V_R=400V, dl/dt= 250A/uA, I_F=8A$	$Q_{rr}$	13	nC

### THERMAL CHARACTERISTICS

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

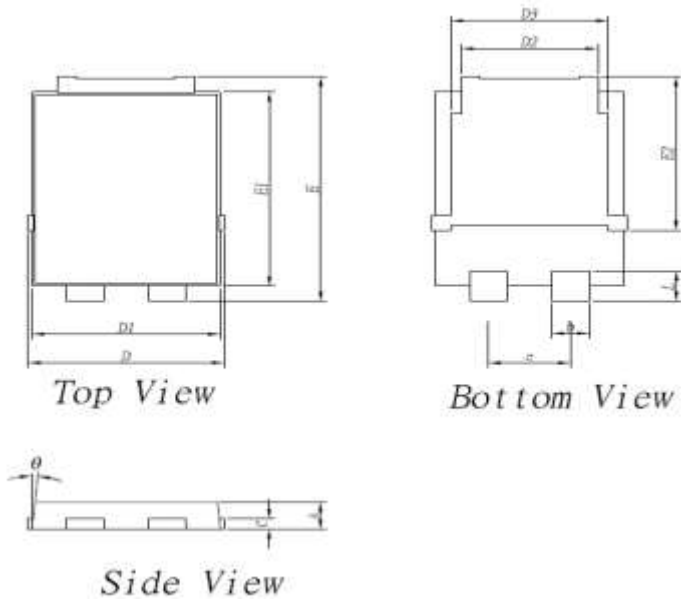
### Note :

- (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)  $I_{PK}=4.9A, V_{DB}=100V, T_J=25^\circ C$

REV.Pre-0 , Jun-2016, TBD

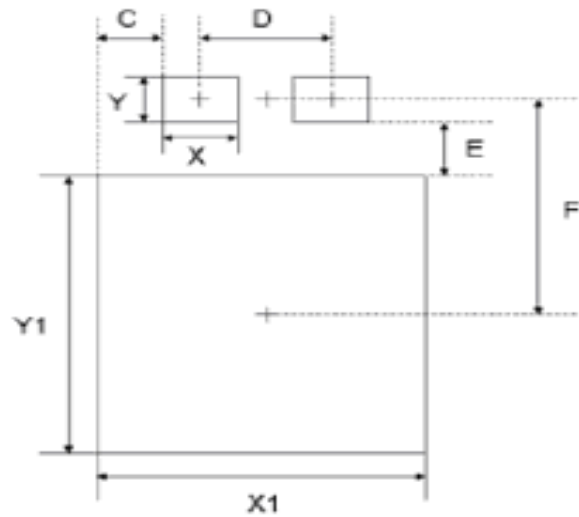
**MECHANICAL AND MARKING INFORMATION**  
**UJD06508F5**

**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
$\theta$	--	--	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