UJD06510F5

SILICON CARBIDE SCHOTTKY DIODE

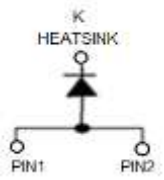
REVERSE VOLTAGE – 650 Volts
FORWARD CURRENT – 10 Amperes

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”.
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.989 grams (Approximate)
- Marking code: UJD06510F5

F5



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	@T_C=TBD°C	$I_{(AV)}$	10	A
Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load.		I_{FSM}	60	A
Single Pulse Avalanche Energy (Note 4)	@L=5mH	EAS	84	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=10A	T_J=25°C T_J=175°C	V_F	-- --	1.70 2.25	V
Leakage current	V_R=650V	T_J=25°C T_J=175°C	I_R	-- --	250 800	uA
Typical junction capacitance (Note 2)			C_J	290(TBD)		pF

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX	UNIT
Reverse recovery charges	V_R=400V,dI/dt= 250A/uS ,IF=10A	Qrr	16	nC

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3)	$RthJ_C$ $RthJ_L$	TBD TBD	°C/W

REV.Pre-0 , Jun-2016, TBD

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}=5.5A,V_{DD}=100V,T_J=25°C

MECHANICAL AND MARKING INFORMATION
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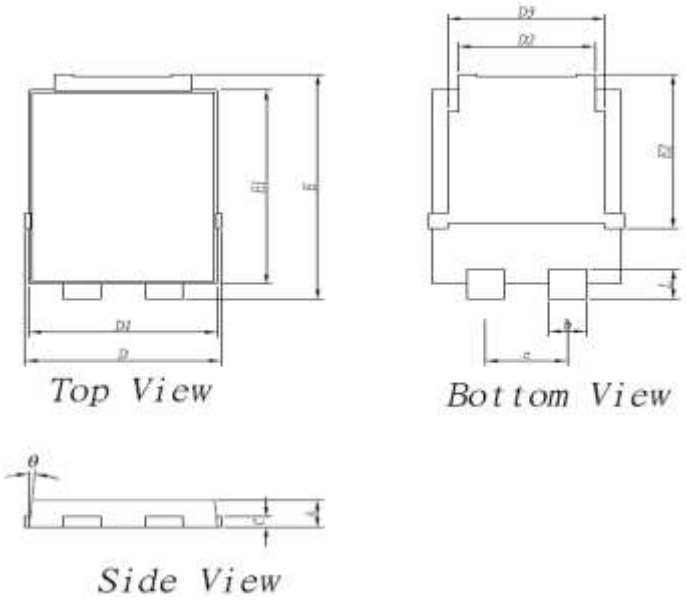
Package Dimension :



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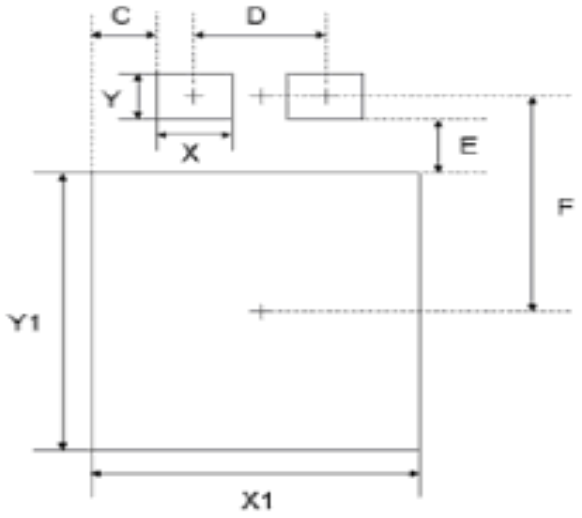
DIM.	MIN.	TYP.	MAX
A	1.60	1.80	2.00
b	1.80	2.00	2.30
C	--	0.70	--
D	--	10.40	--
D1	9.80	10.00	10.30
D2	7.00	7.25	7.50
D3	8.10	8.35	8.60
E	14.50	15.00	15.50
E1	12.70	13.00	13.30
E2	10.00	10.25	10.60
e	4.35 REF.		
L	1.70	2.00	2.30
θ	--	--	5°
All dimension in millimeter			

SUGGESTED PAD LAYOUT :



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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