

SILICON CARBIDE SCHOTTKY DIODE

REVERSE VOLTAGE – 650 Volts
FORWARD CURRENT – 4 Amperes

FEATURES

- Positive temperature coefficient for save operation and easy of paralleling
- 175°C maximum operating junction temperature
- Essentially no reverse or forward recovery
- Extremely fast switching not dependent on temperature
- Qualification is according to AEC-Q101 Rev_D

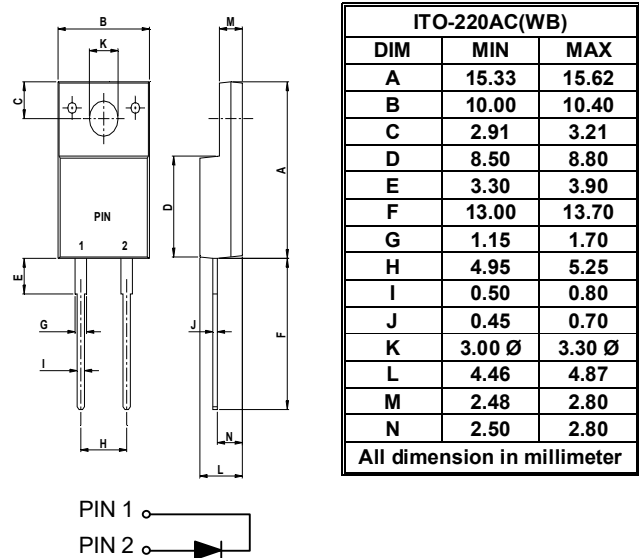
APPLICATION

- Switch mode Power Supplies
- Power Factor correction
- Power Factor correction modules

MECHANICAL DATA

- Case: JEDEC TO-220ACFP
- Case Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.
- Lead free finish, RoHS compliant
- Weight: 1.497 grams (Approximate)
- Marking code: LSC04065FW

ITO-220AC(WB)



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	$I_{(AV)}$	4	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	28	A
Single Pulse Avalanche Energy	EAS	33	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)	$I_F=4A$ $T_J=25^\circ C$ $T_J=175^\circ C$	V_F	-- 1.94	1.70 2.25	V
Leakage current	$V_R=650V$ $T_J=25^\circ C$ $T_J=175^\circ C$	I_R	-- 16.5	170 550	uA
Typical junction capacitance (Note 2)		C_J		125	pF

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	UNIT
Total Capacitive Charge	$V_R=400V, dl/dt= 250A/uS,$ $I_F=4A$	Q_c	14	nC

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	R_{thJc}	7	°C/W
	R_{thJL}	5	

Note :

REV.-4 ,Aug -2019, KTGA40

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 1.0V DC.
- (3) Thermal resistance test performed in accordance with JESD-51.
- (4) The unit mounted on Aluminum fin-type Heatsink 24mm x 42 mm x 24mm.

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RATING AND CHARACTERISTIC CURVES
LSC04065FW



FIG.1 FORWARD CURRENT DERATING CURVE

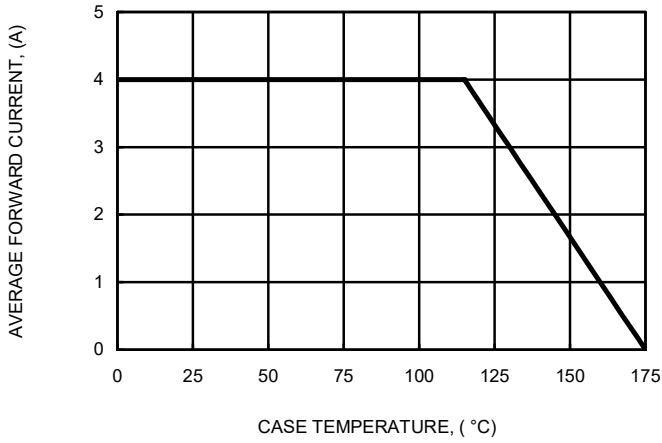


FIG.2 NON-REPETITIVE PEAK SURGE FORWARD CURRENT

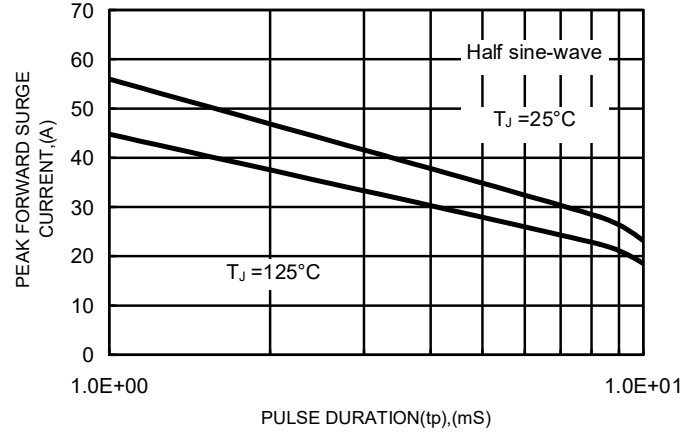


FIG.3 TYPICAL FORWARD CHARACTERISTICS

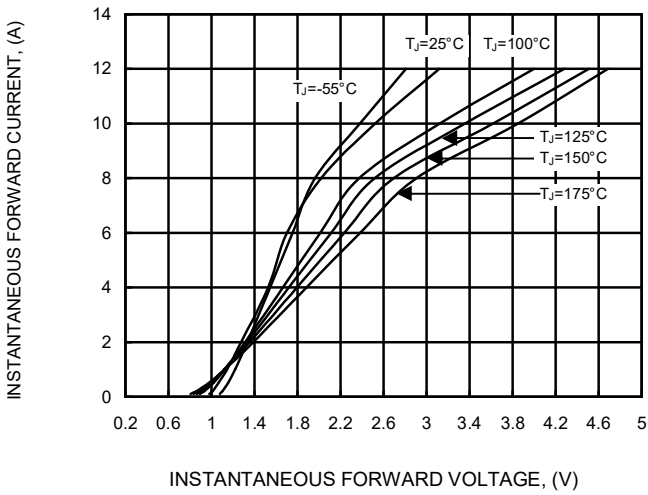


FIG.4 TYPICAL JUNCTION CAPACITANCE

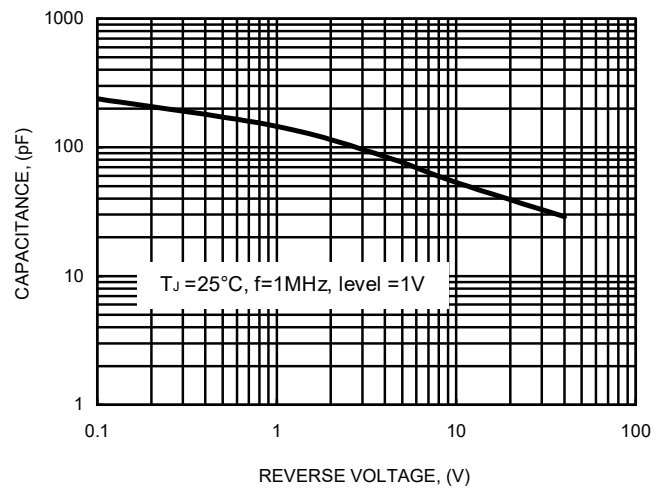


FIG.5 TYPICAL REVERSE CHARACTERISTICS

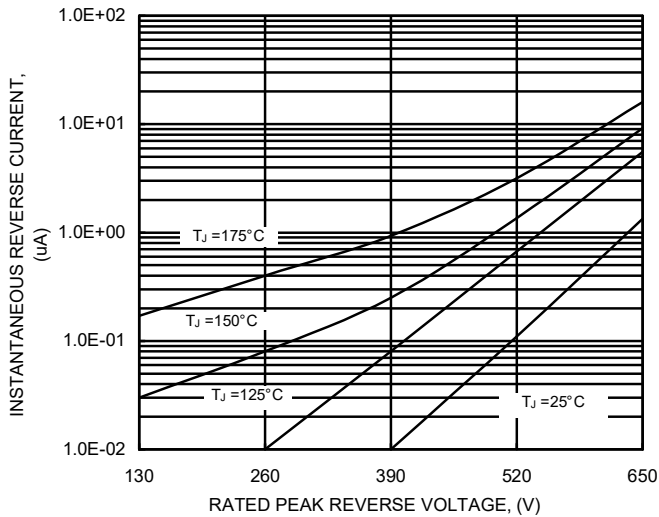
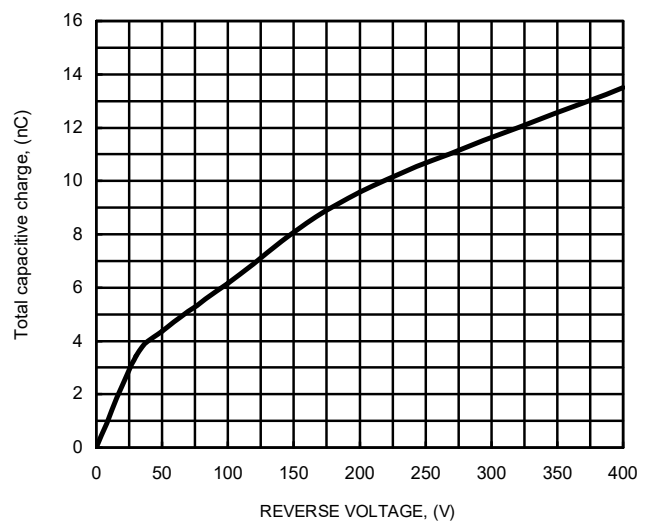
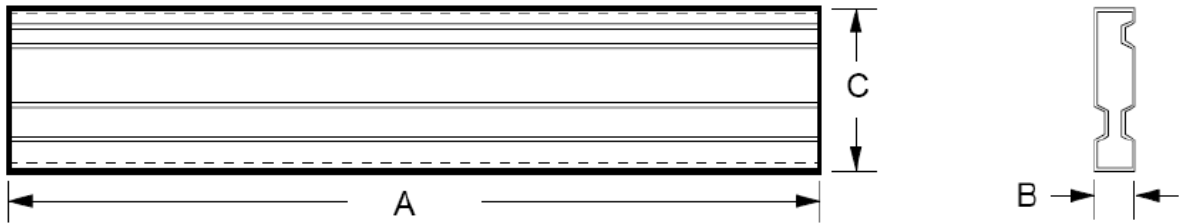


FIG.6 TYPICAL CAPACITIVE CHARGES

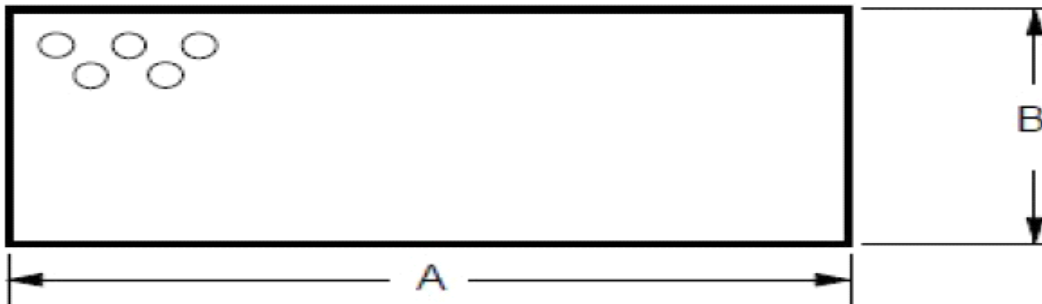


Packaging Information:

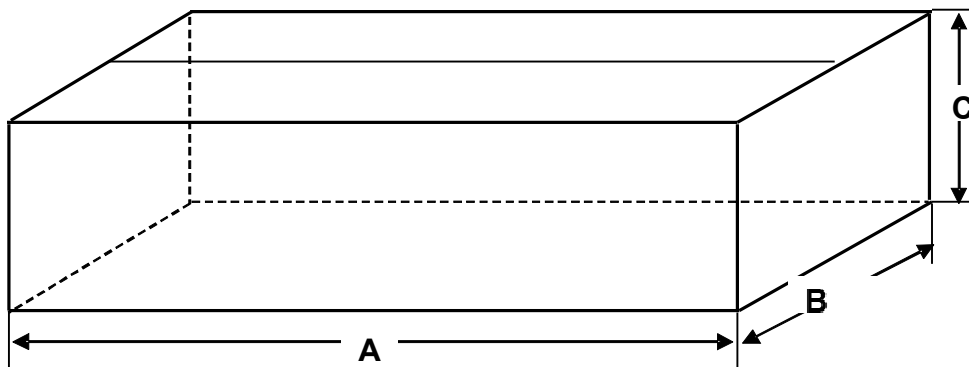
1. TUBE



2. AIR BAG

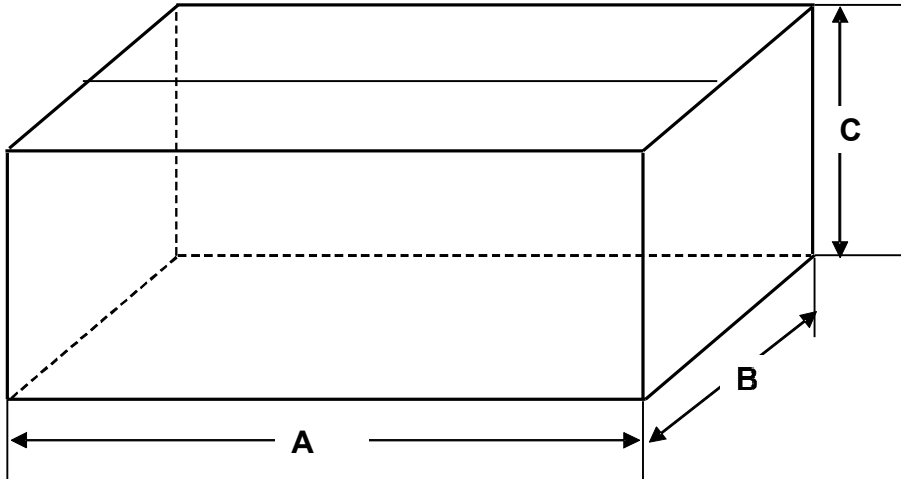


3. INNERBOX



Packaging Information:

4. CARTON



Unit:mm

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'ty/per	REMARK
TUBE	536	5.6	31.8	50	/
AIR BAG	800	550	/	/	/
INNERBOX	555	165	105	2000	40TUBE
CARTON	575	179	225	4K	2 INNER BOX

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