LITE-ON SEMICONDUCTOR

20SQ50CG

SCHOTTKY BARRIER RECTIFIER

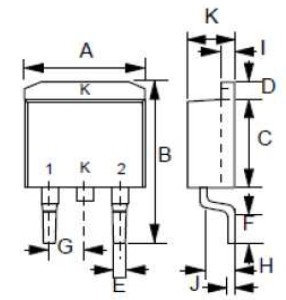
REVERSE VOLTAGE – 50 Volts
FORWARD CURRENT – 20 Amperes

FEATURES
- Metal of silicon rectifier , majority carrier conduction
- Guard ring for transient protection
- Low power loss , high efficiency
- High surge & current capability , low VF

APPLICATION
- For use in Solar Cell junction box as bypass diode for protection, using DC forward current without reverse bias

MECHANICAL DATA
- Case: TO-263 molded plastic
- Case Material: ”Green” Molding compound, UL flammability classification 94V- 0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity : As marked on body
- Weight : 1.4grams(Approximate)
- Mounting position: Any
- Terminal finish : Matted plating
- Marking: 20SQ50CG

D²PAK



D²PAK		
DIM.	MIN.	MAX.
A	9.65	10.69
B	14.60	15.88
C	8.25	9.25
D	-----	1.67
E	0.51	1.14
F	2.29	2.79
G	2.29	2.79
H	2.03	2.92
I	1.14	1.40
J	0.30	0.64
K	4.37	4.83
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwis e specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	50	V
Maximum DC blocking voltage		V_{DC}	50	V
Average rectified forward current	@Tc = 120℃	$I_{(AV)}$	20	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	250	A
Operating and Storage temperature range		T_J,T_{STG}	-55 ~ +175	℃
Junction temperature in DC forward current without reverse bias t≦ 1h (Note 1)		T_J	≦200	℃

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	TYP	MAX	UNIT
Forward voltage	I_F = 10A	T_J = 25℃	V_F	0.51	0.53	V
Reverse leakage current	V_R = 50V	T_J = 25℃ T_J = 125℃	I_R	25 25	200 80	uA mA
Typical junction capacitance (Note 2)			C_J	750		pF

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	$RthJ_A$ $RthJ_L$ $RthJ_C$	20 1 5	℃/W

Note :
(1) Meets the requirement of IEC 61215 ed. 2 bypass diode thermal test
(2) Measured at 1.0MHz and applied reverse voltage of 4.0$V_{DC.}$
(3) Thermal Resistance Junction to Case and Ambient
(4) Thermal Resistance test performed in accordance with JESD-51

REV. 2, Aug.-2015, KTHB17

RATING AND CHARACTERISTIC CURVES
20SQ50CG

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FIG.1- FORWARD CURRENT DERATING CURVE

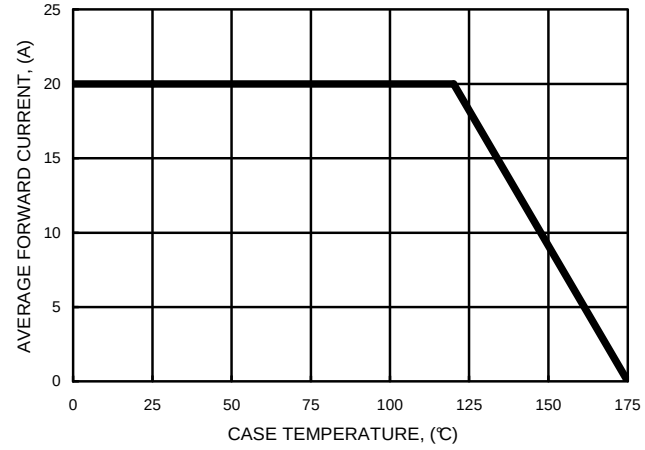


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

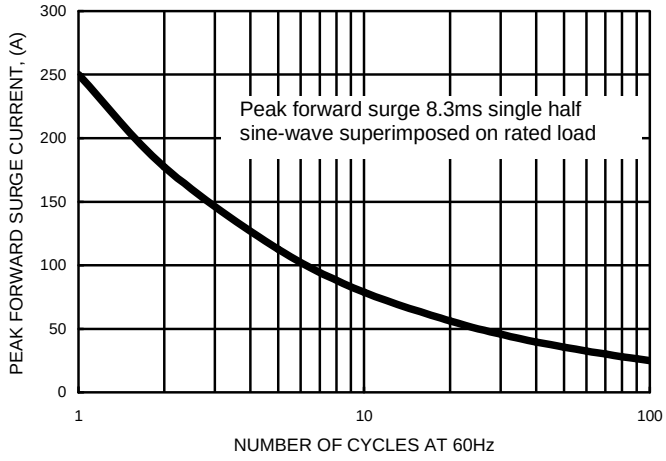


FIG.3- TYPICAL FORWARD CHARACTERISTICS

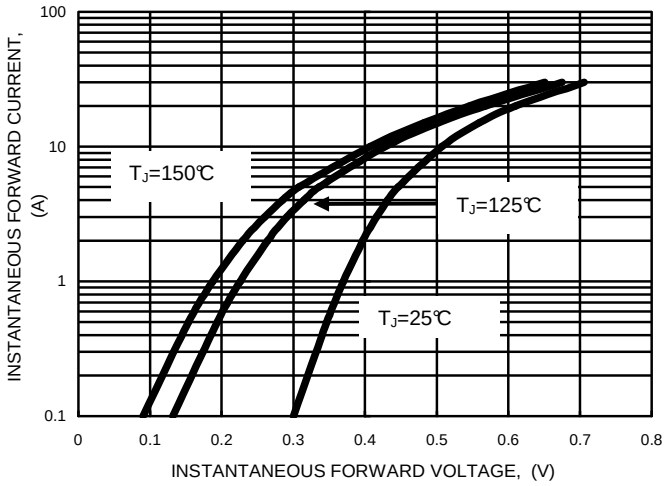


FIG.4- TYPICAL JUNCTION CAPACITANCE

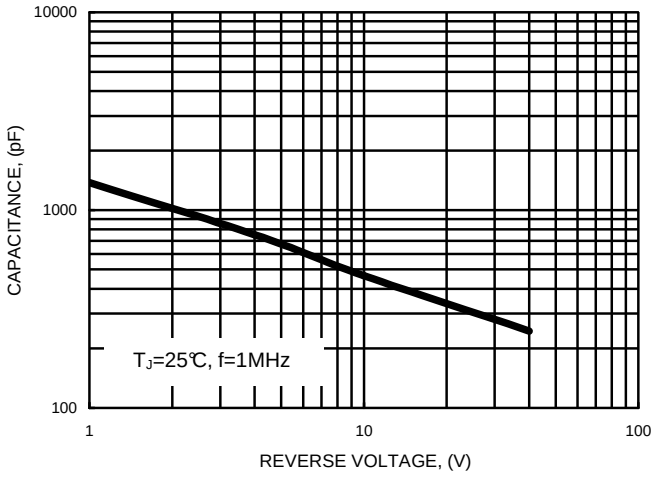
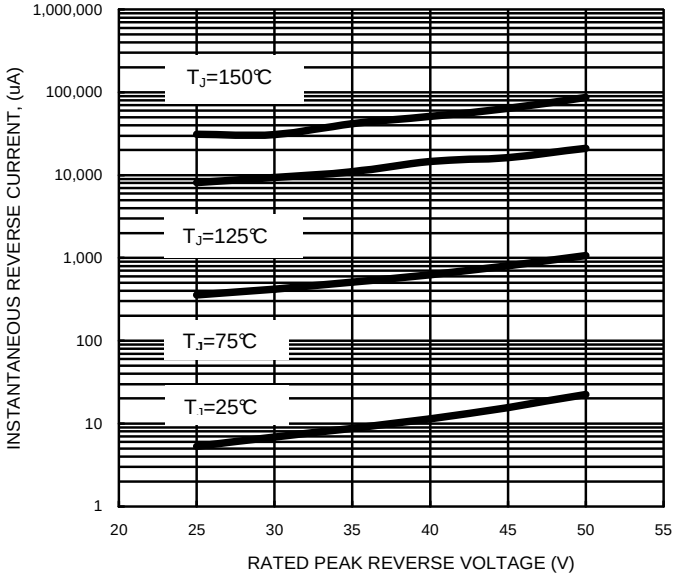


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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