

TRENCH SCHOTTKY RECTIFIER

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 20 Amperes

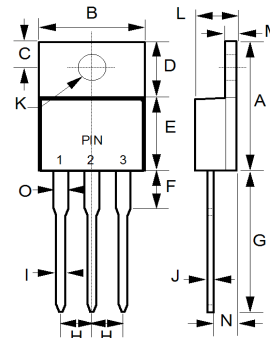
FEATURES

- Trench schottky technology
- Low power loss, high efficiency
- Low forward drop voltage
- Qualified according to AEC-Q101 Rev_C
- For use in low voltage, high frequency inverters, free wheeling and polarity protection applications

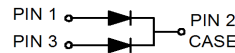
MECHANICAL DATA

- Case: TO-220AB molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Terminals: Matte tin
- Lead free finish, RoHS compliant
- Polarity: As marked on the body
- Weight: 0.072 ounces, 2.0275 grams(Approximate)
- Mounting Position: Any

TO-220AB



TO-220AB		
DIM	MIN	MAX
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.00
J	0.30	0.64
K	3.53Φ	4.09Φ
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.37
All Dimensions in millimeter		



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}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum Average rectified output current per device	I_F	20	A
	@ $T_c = 130^\circ C$		
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150	A
Peak Repetitive Forward Current Per diode (Square Wave, 20KHz, $T_c=130^\circ C$)	I_{FRM}	20	A
Operating junction and Storage temperature range	T_J, T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note1)	$I_F = 5A$	V_F	$T_J = 25^\circ C$	0.50	0.72
			$T_J = 125^\circ C$	0.48	0.64
	$I_F = 10A$	V_F	$T_J = 25^\circ C$	0.66	0.79
			$T_J = 125^\circ C$	0.58	0.68
Leakage current	$V_R = 100V$	I_R	10	150	uA
			5	25	mA
Typical junction capacitance (Note2)		C_J		430	pF

THERMAL CHARACTERISTICS

THERMAL CHARACTERISTIC	SYMBOL	TYP	UNIT
Typical thermal resistance (Note3)	R_{thJc}	1	°C/W
	R_{thJl}	2	
	R_{thJa}	10	

Note :

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0V DC
- (3) Thermal resistance junction to case, lead and ambient. The device mounted on 75 mm x 75 mm x 2 mm copper plate.

REV.-8, Sep-2019, KTHC108

Please be aware that an **Important Notice and Disclaimer** concerning availability, disclaimers, and use in critical applications of LSC products thereto appears at the end of this Data Sheet.

RATING AND CHARACTERISTIC CURVES G20100CTW



FIG.1- FORWARD CURRENT DERATING CURVE

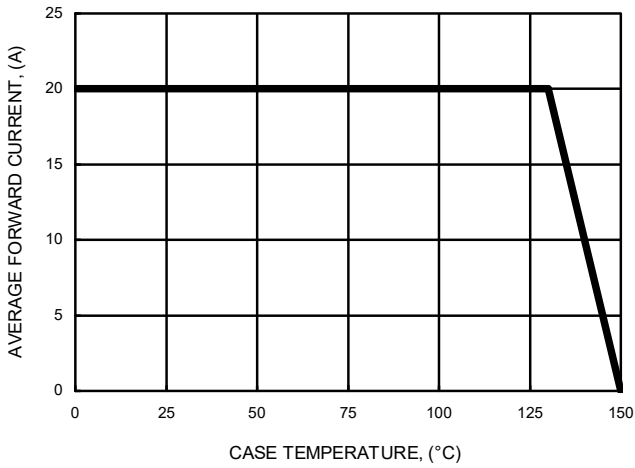


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

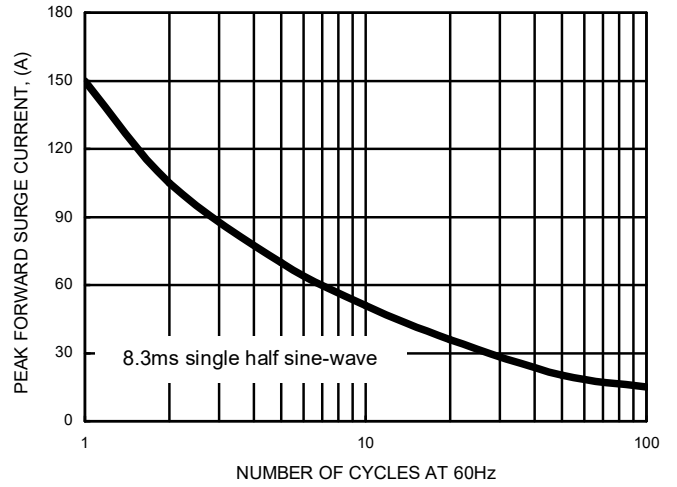


FIG.3- TYPICAL FORWARD CHARACTERISTICS

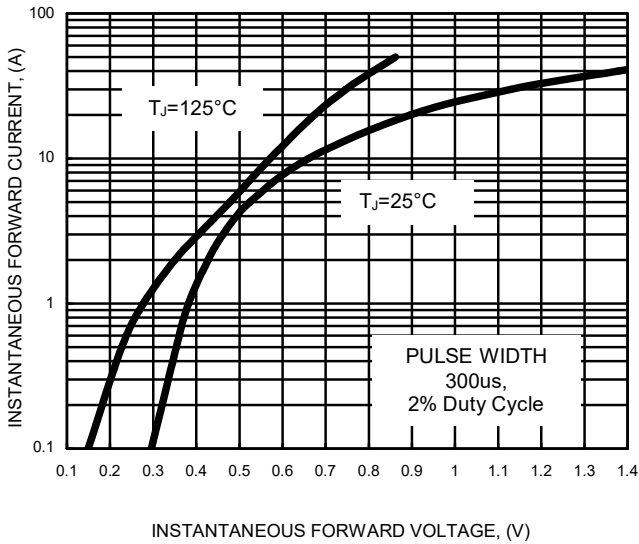


FIG.4- TYPICAL JUNCTION CAPACITANCE

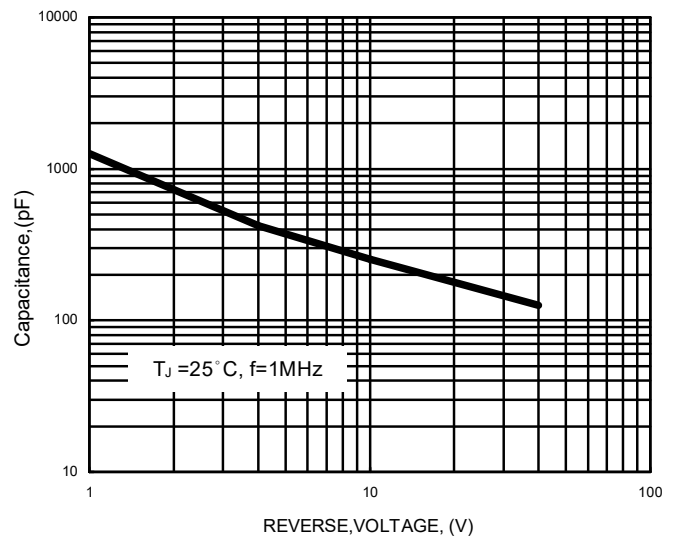
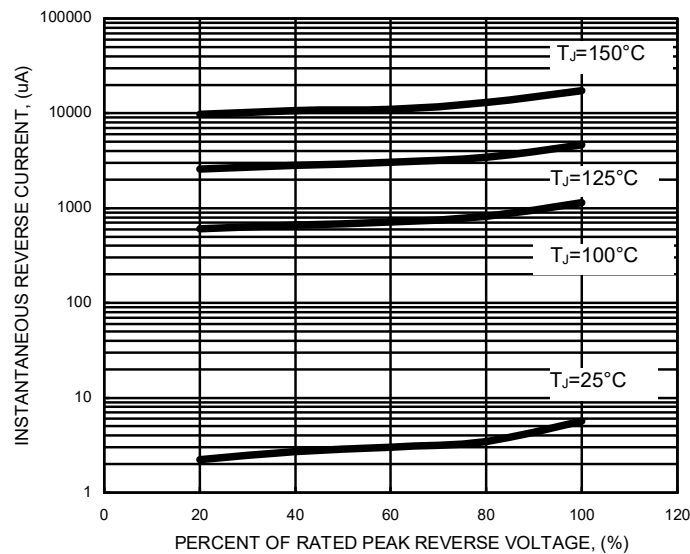


FIG.5- TYPICAL REVERSE CHARACTERISTICS



IMPORTANT NOTICE AND DISCLAIMER

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design purchase or use.

ALL INFORMATION ARE PROVIDED AS-IS, EVEN IT HAS QUALIFIED BY THE AEC-Q101 WHICH SATISFY INDUSTRIAL APPLICATION REQUIREMENT, EXCEPT AS EXPRESSLY STATED IN THIS DATA SHEET IS APPLIED FOR AUTOMOTIVE GRADE, LSC MAKE NO WARRANTIES, REPRESENTATION OR GUARANTEE, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, REGARDING ANY MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE LSC TECHNOLOGY.

LSC DOES NOT ASSUME ANY LIABILITY OR COMPENSATION FOR ANY APPLICATION ASSISTANCE OR CUSTOMER PRODUCT DESIGN, AND MAKE NO WARRANTY OR ACCEPT ANY LIABILITY WITH PRODUCTS, WHICH ARE PURCHASED OR USED FOR ANY UNINTENDED OR UNAUTHORIZED APPLICATION.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.