LITE-ON SEMICONDUCTORS

G40120CTW

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 120 Volts
FORWARD CURRENT – 40 Amperes

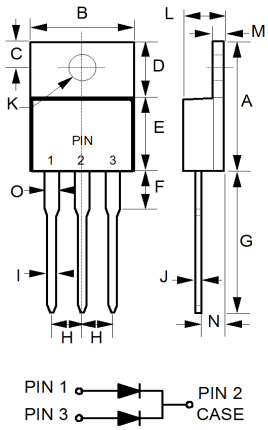
FEATURES

- Trench Schottky technology
- Low power loss, high efficiency
- Low forward drop voltage
- 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, (No Br. Sb. Cl.) "Halogen-free".
- Plastic package has UL flammability classification 94V-0
- 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
- Max. mounting torque = 0.5 N.m (5.1 Kgf-cm)

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℃ ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	120	V
Maximum DC Blocking Voltage	V_{DC}	120	V
Average Rectified Output Current per device @Tc=100℃	I_F	40	A
Non-repetitive Peak Forward Surge Current single half sine-wave tp=8.3ms	I_{FSM}	250	A
Operating and Storage temperature range	T_J, T_{STG}	-55 to +150	℃

STATIC ELECTRICAL CHARACTERISTICS

Parameter	Test condition	Symbol	Typ.	Max.	Unit
Maximum Forward Voltage Note(1)	IF=20A @Tj=25℃ IF=20A @Tj=125℃	VF	0.79 0.64	0.86 0.72	V
Maximum DC Reverse Current	VR=120V @Tj=25℃ @Tj=125℃	IR	- 6	400 32	uA mA
Junction Capacitance per element	1MHz, VR=4V	Cj	800	-	pF

THERMAL CHARACTERISTICS

Parameter	SYMBOL	VALUE	UNIT
Typical thermal resistance Junction (Note 2&3)	$R_{\Theta JC}$ $R_{\Theta JL}$ $R_{\Theta JA}$	2.0 5.0 10	℃/W

Note :

(1) 300us Pulse Width, 2% Duty Cycle.
(2) Thermal Resistance Junction to Case, Lead and Ambient.
(3) Device mounted on 100 x 100 x 2 mm Copper plate.

REV. 2, Jan-2015, KTHC118

RATING AND CHARACTERISTIC CURVES
G40120CTW

FIG.1- FORWARD CURRENT DERATING CURVE

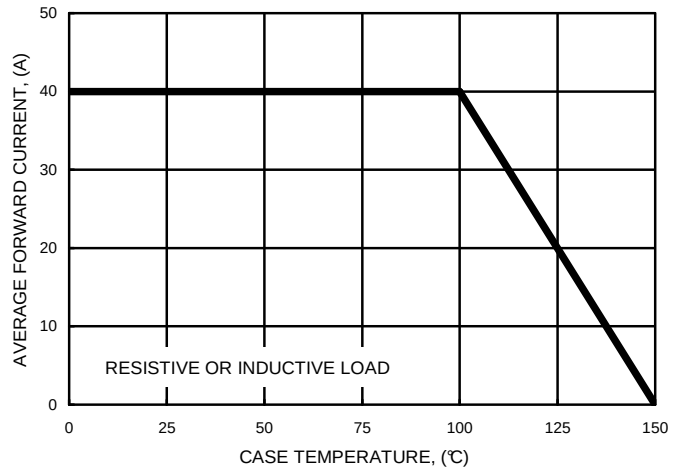


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

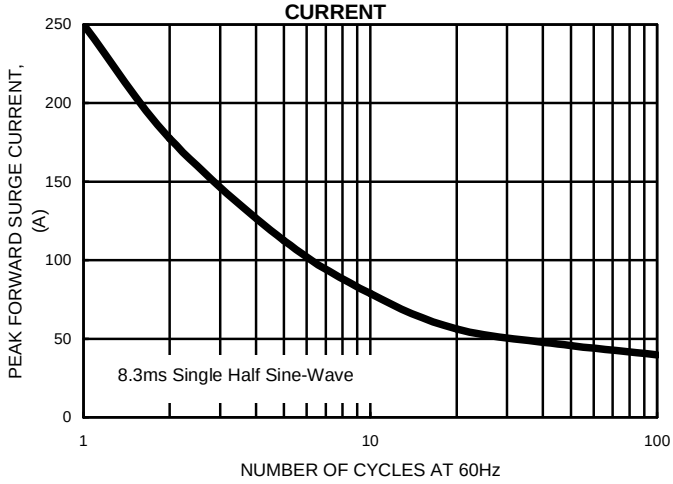


FIG.3- TYPICAL JUNCTION CAPACITANCE

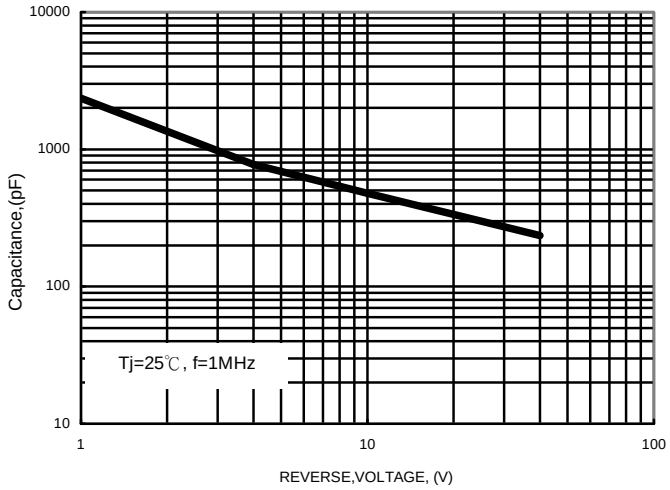


FIG.4- TYPICAL FORWARD CHARACTERISTICS

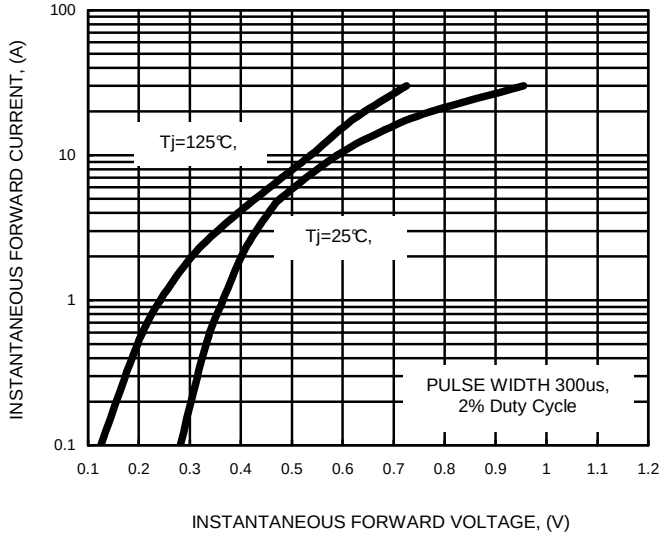
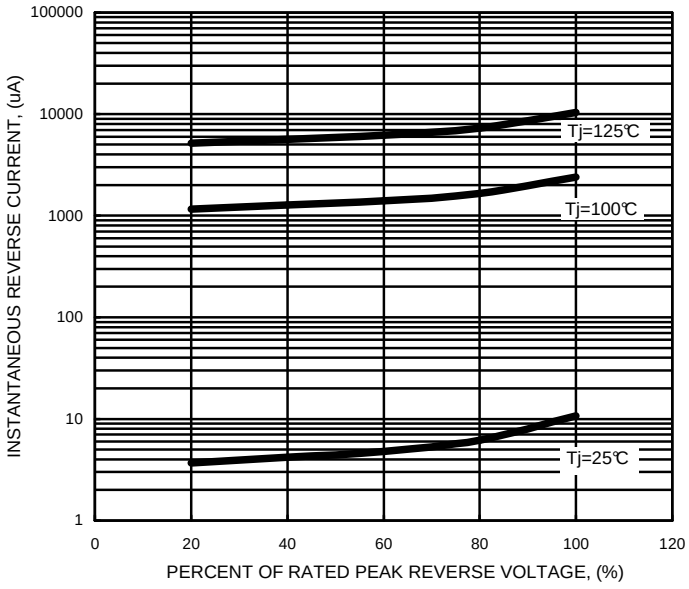


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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