

## TRENCH SCHOTTKY RECTIFIER

**REVERSE VOLTAGE** – 100 Volts  
**FORWARD CURRENT** – 40 Amperes

### FEATURES

- High junction temperature capability
- Negligible switching losses
- Good trade off between leakage current and forward voltage drop
- Qualification is according to AEC-Q101 Rev\_D
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

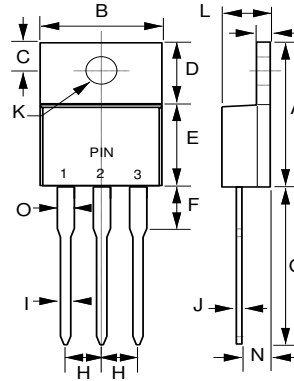
### APPLICATION

- High frequency miniature switch mode of adaptors
- On-board DC-DC converters
- Use in high frequency inverters

### MECHANICAL DATA

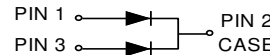
- Package: JEDEC TO-220AB
- Package Material: "Green" Molding compound, UL flammability classification 94V-0, "Halogen-free".
- Lead free finish, RoHS compliant
- Polarity : As marked on body
- Marking code: G40H100CTW
- Weight: 0.07 ounces, 1.927 grams (Approximate)

### 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 DC blocking voltage	$V_{DC}$	100	V
Maximum Average rectified forward current	@ $T_c = 120^\circ\text{C}$	40	A
Non repetitive peak reverse current	@ $t_p=2\mu\text{s}$	3	
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	°C

### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	$I_F = 20\text{A}$	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	--	0.79	V
			0.64	--	
Reverse leakage current	$V_R = 100\text{V}$	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$	--	10	uA
			1.2	10	
Typical junction capacitance (Note 5)		$C_J$		1360	pF

### THERMAL CHARACTERISTICS

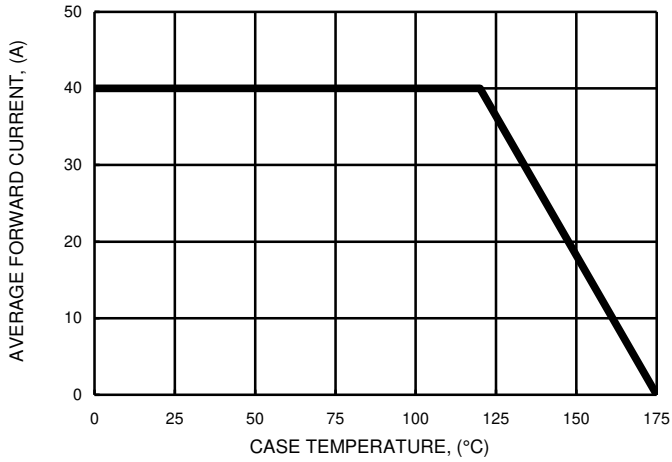
PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	$R_{thJL}$	1	°C/W
	$R_{thJC}$	2	

#### Note:

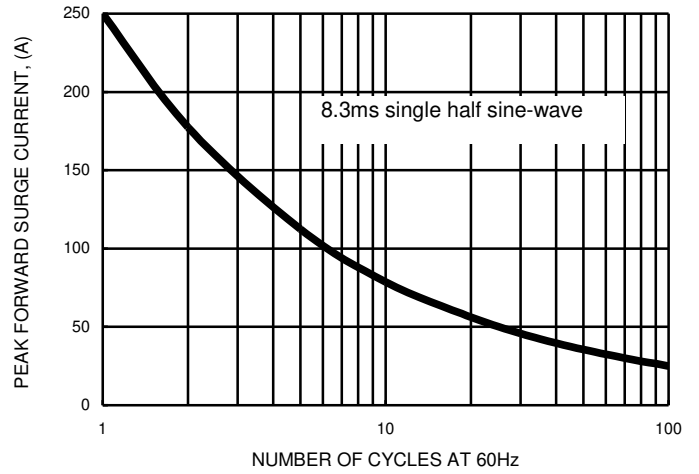
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied reverse voltage of 4.0 VDC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on Copper heatsink (100mm x 100mm x 2mm).

**RATING AND CHARACTERISTIC CURVES**  
**G40H100CTW**

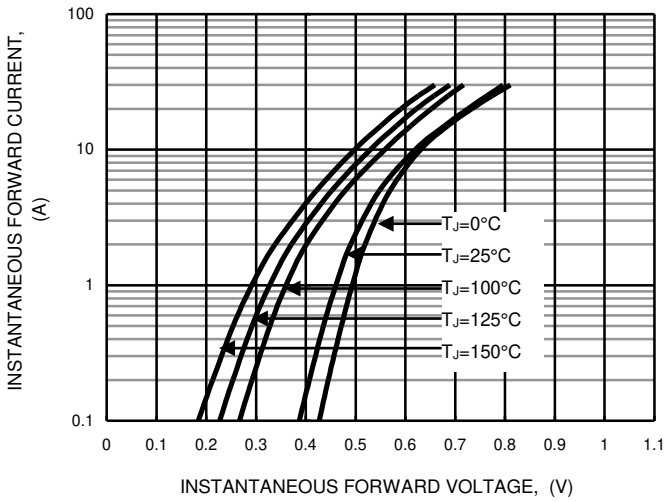
**FIG.1- FORWARD CURRENT DERATING CURVE**



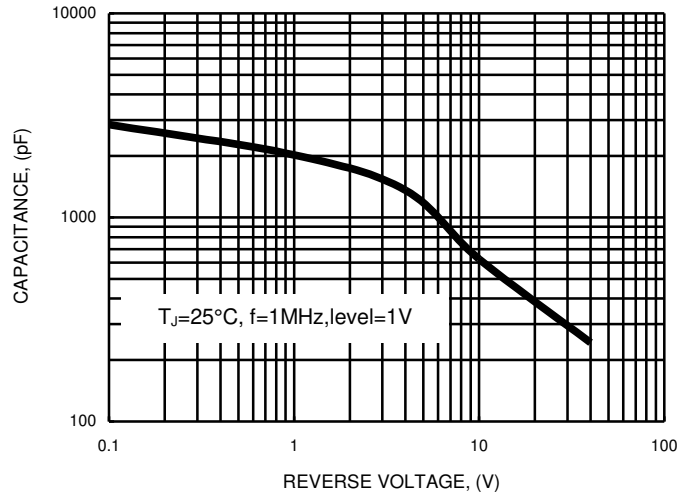
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



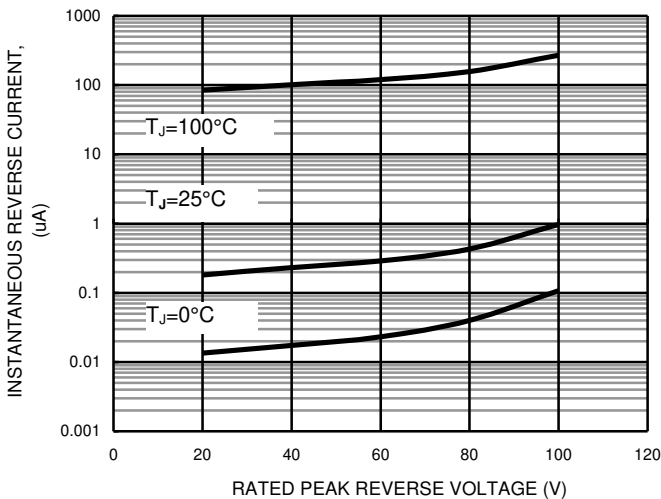
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



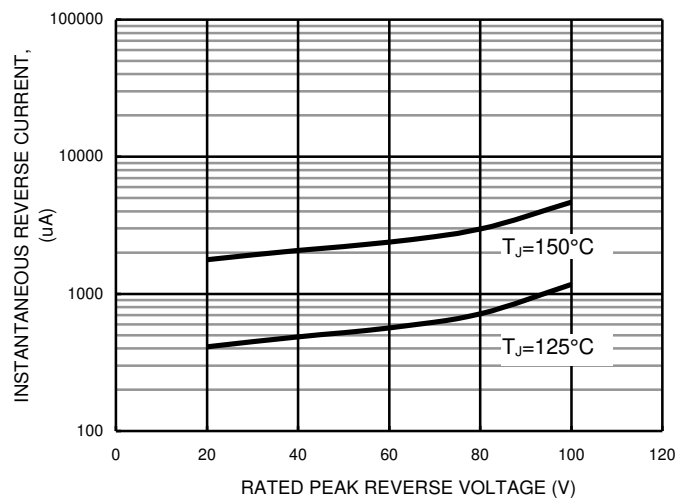
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



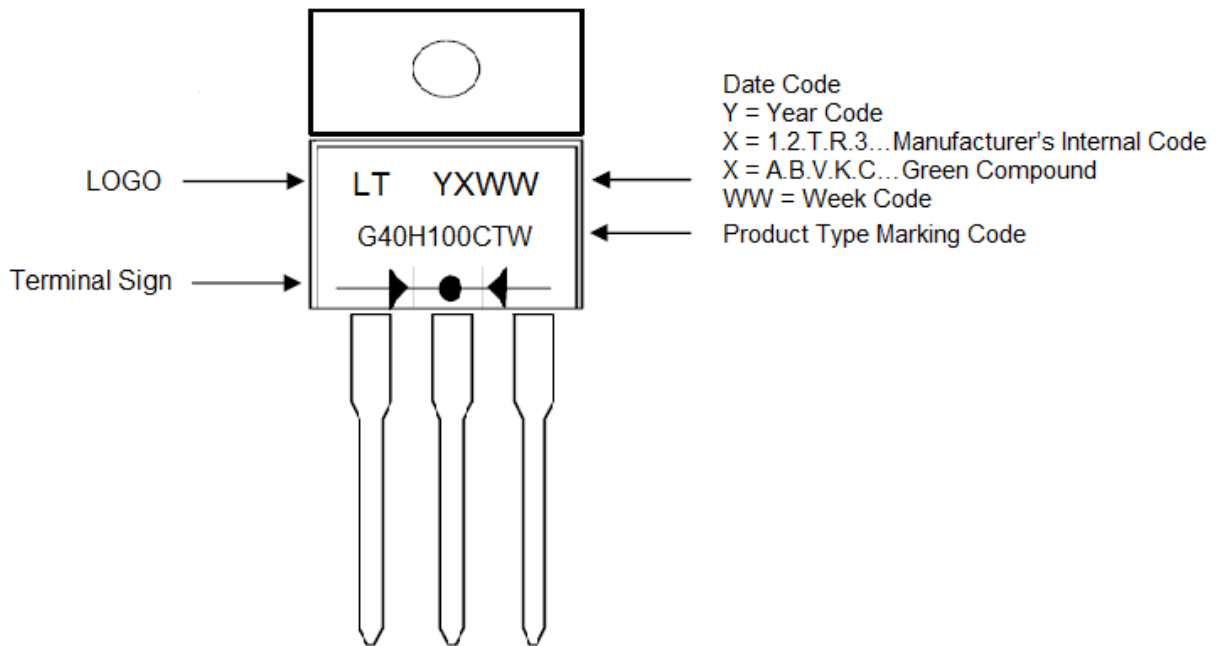
**FIG.6- TYPICAL REVERSE CHARACTERISTICS**



**Ordering Information:**

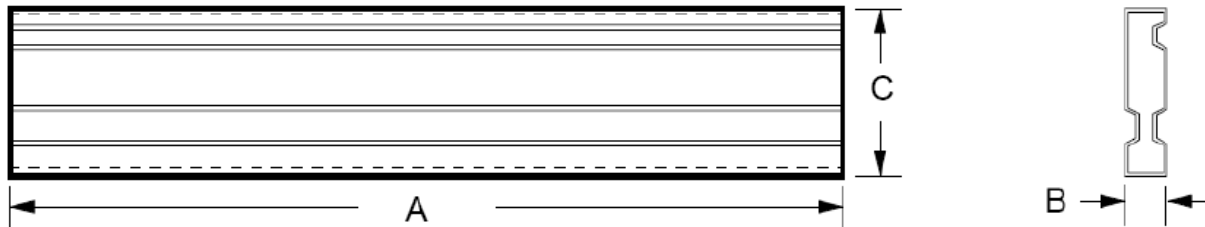
Part Number	Package	Packing	
		Qty.	Carrier
G40H100CTW	TO-220AB	50pcs	Tube

**Marking Information:**

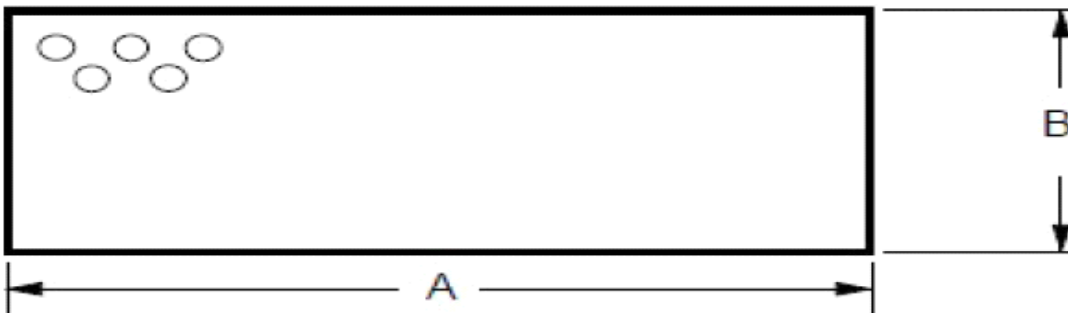


## Packaging Information:

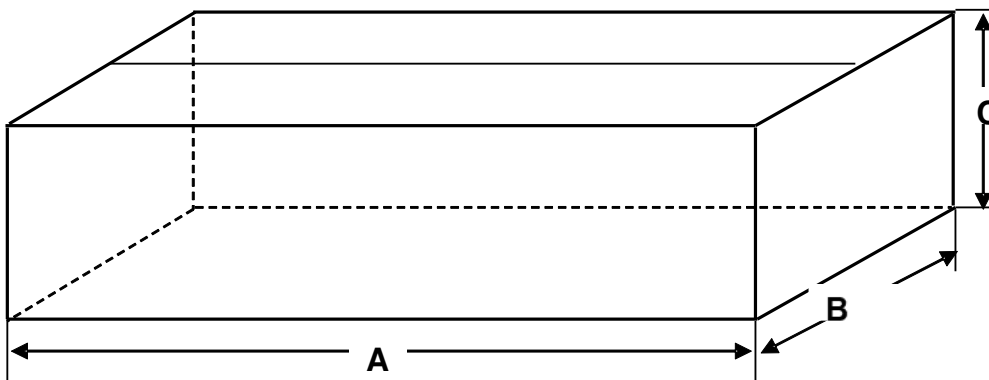
### 1. TUBE



### 2. AIR BAG

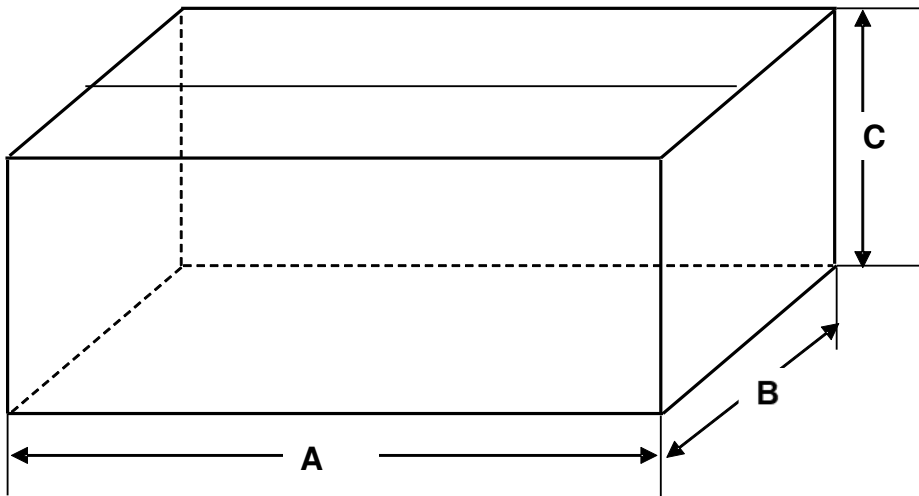


### 3. INNERBOX



## Packaging Information (continued):

### 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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