

## TRENCH SCHOTTKY RECTIFIER

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

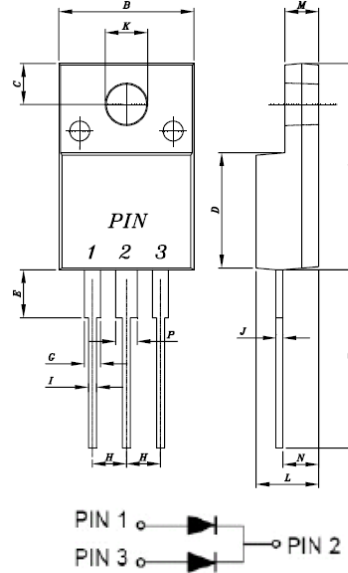
### FEATURES

- 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
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

### MECHANICAL DATA

- Package: ITO-220AB molded plastic
- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Terminals: Matte tin
- Polarity: As marked on the body
- Weight: 0.06 ounces, 1.70 grams
- Mounting Position: Any

### ITO-220AB(WB)



ITO-220AB (WB)		
DIM.	MIN.	MAX.
A	14.95	15.95
B	10.00	10.40
C	2.76	3.36
D	8.50	8.80
E	3.30	3.90
F	13.0	13.70
G	1.15	1.70
H	2.40	2.70
I	0.50	0.80
J	0.45	0.70
K	3.00	3.30
L	4.46	4.87
M	2.48	2.80
N	2.50	2.80
P	1.50	1.90

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
Average rectified output current per device	$I_F$	40	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	250	A
Peak repetitive forward current per diode (Square wave, 5KHz, $T_c = 120^\circ\text{C}$ )	$I_{FRM}$	60	A
Operating junction temperature range	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	MAX	UNIT
Forward voltage (Note 4)	$I_F = 10\text{A}$	$V_F$	0.54	--	V
	$T_J = 25^\circ\text{C}$		0.45	--	
Leakage current	$I_F = 20\text{A}$	$I_R$	--	0.73	uA
	$V_R = 100\text{V}$		--	0.67	
Typical junction capacitance (Note 5)	$T_J = 25^\circ\text{C}$	$C_J$	--	400	mA
	$T_J = 125^\circ\text{C}$		--	45	
			850		pF

### THERMAL CHARACTERISTICS

THERMAL CHARACTERISTIC	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 6)	$R_{thJC}$	1	°C/W
	$R_{thJL}$	3	
	$R_{thJA}$	10	

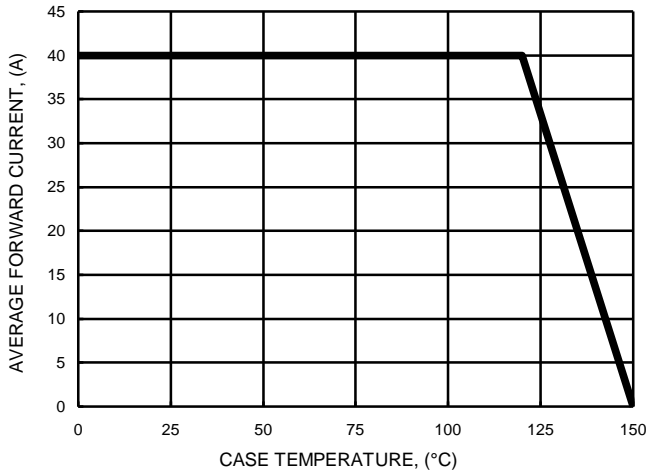
#### Notes:

- EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
- 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.
- Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 300us pulse width, 2% duty cycle.
- Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- Thermal resistance junction to case, lead and ambient. Device mounted on 200mm x 200mm x 10mm copper plate.

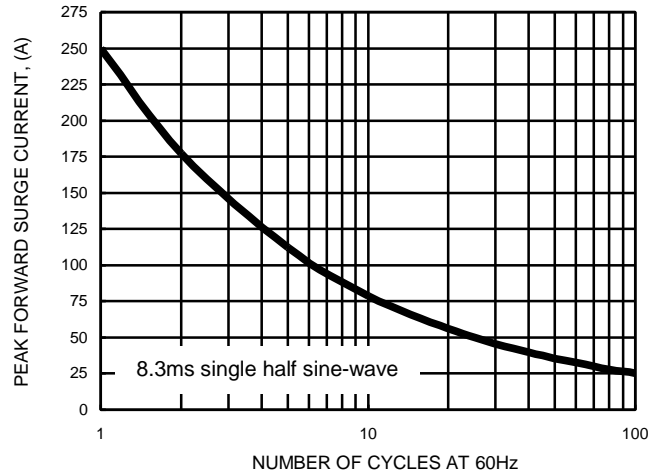
**RATING AND CHARACTERISTIC CURVES**

**G40100CTFW**

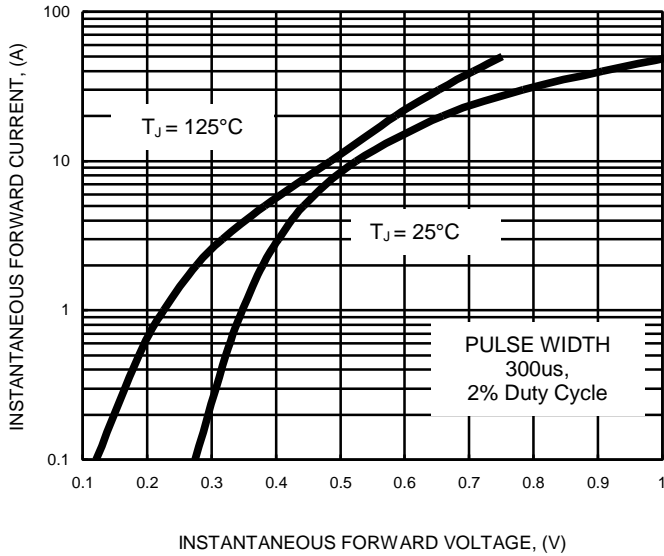
**FIG.1- FORWARD CURRENT DERATING CURVE**



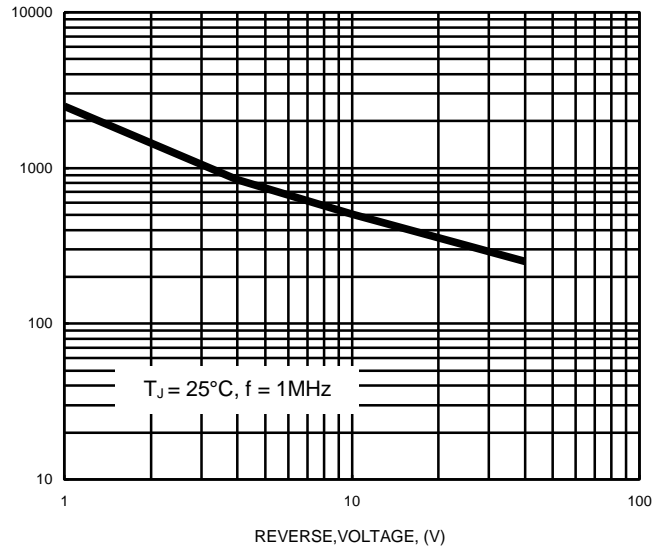
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



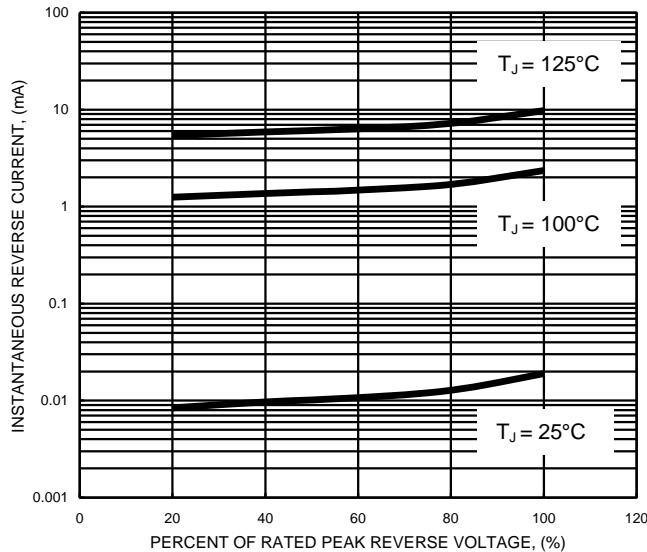
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



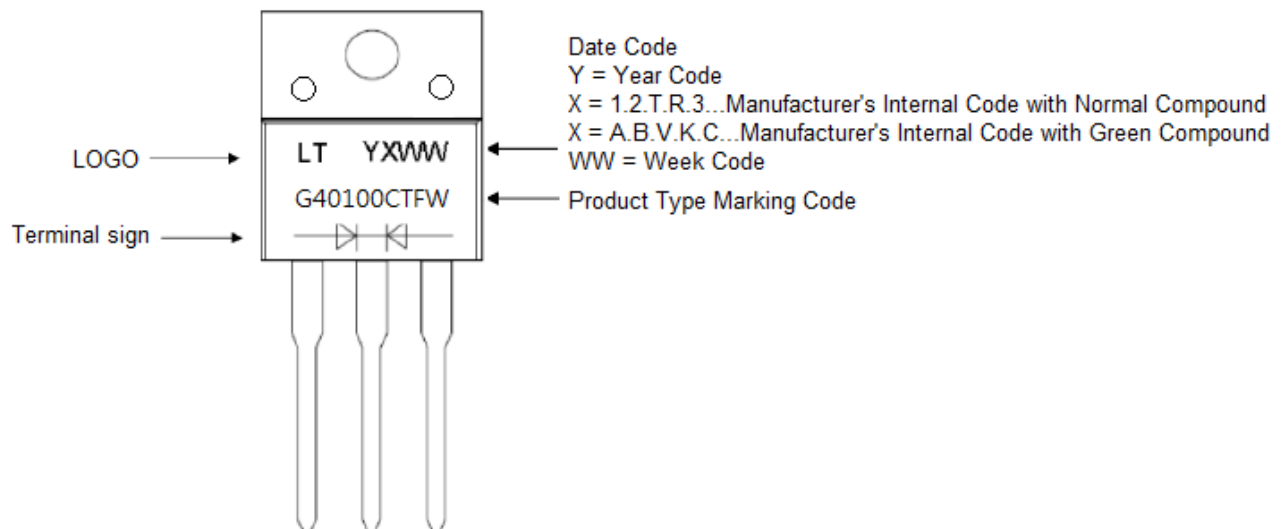
**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



## Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
G40100CTFW	ITO-220AB(WB)	50 pcs	Tube

## Marking Information:



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