

## TRENCH SCHOTTKY RECTIFIERS

**REVERSE VOLTAGE – 45 Volts**  
**FORWARD CURRENT – 20 Amperes**

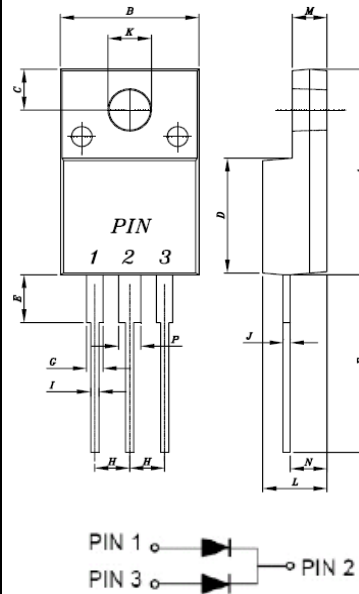
### FEATURES

- 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
- **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: 0.05 ounces, 1.558 grams (Approximate)
- 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	$V_{RRM}$	45	V
Maximum DC Blocking Voltage	$V_{DC}$	45	V
Average Rectified Output Current per Device @ $T_C=110^\circ\text{C}$	$I_F$	20	A
Non-Repetitive Peak Forward Surge Current Single Half Sine-Wave $t_p=8.3\text{ms}$	$I_{FSM}$	180	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
Maximum Forward Voltage (Note 4)	$I_F=10\text{A}$ @ $T_J=25^\circ\text{C}$	$V_F$	-	0.5	V
	$I_F=10\text{A}$ @ $T_J=125^\circ\text{C}$		0.45	-	
Maximum DC Reverse Current	$V_R=45\text{V}$ @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	$I_R$	-	0.5 100	mA mA
Junction Capacitance per Element	$f=1\text{MHz}, V_R=4\text{V}$	$C_J$	1260	-	pF

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Typical Thermal Resistance Junction (Notes 5, 6)	$R_{\theta JC}$	3	°C/W
	$R_{\theta JL}$	4	
	$R_{\theta JA}$	15	

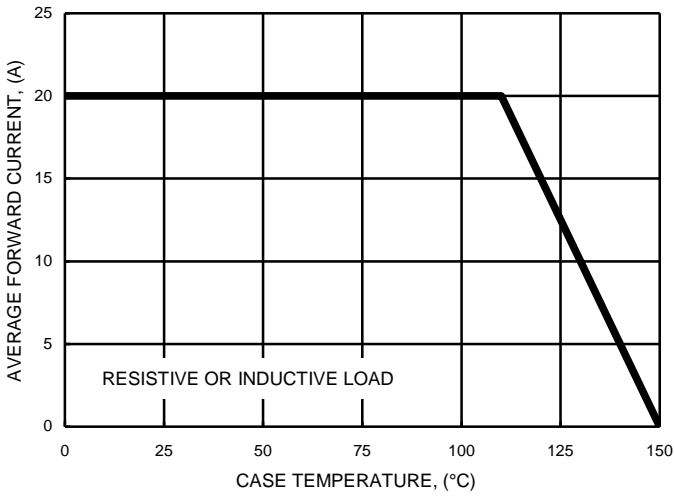
### Notes:

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. Thermal Resistance Junction to Case, Lead and Ambient.
6. Device mounted on 72 x 75 x 2 mm Copper plate.

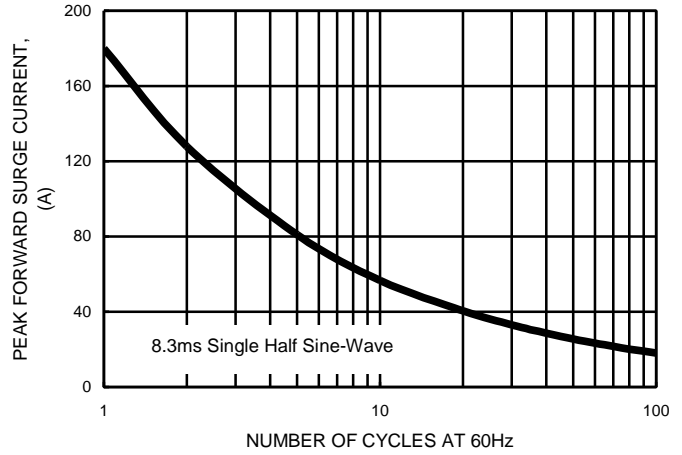
**RATING AND CHARACTERISTIC CURVES**

**G2045CTFW**

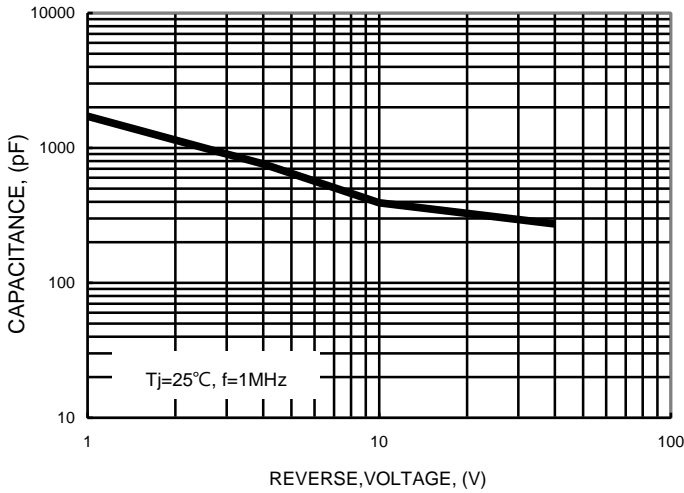
**FIG.1- FORWARD CURRENT DERATING CURVE**



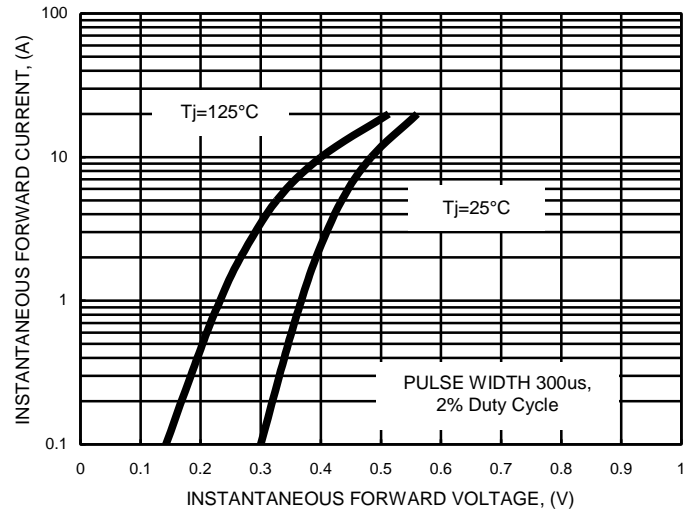
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



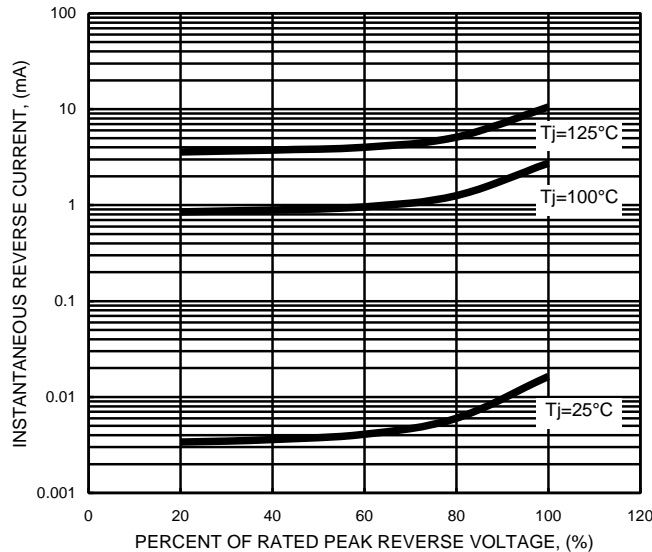
**FIG.3- TYPICAL JUNCTION CAPACITANCE**



**FIG.4- TYPICAL FORWARD CHARACTERISTICS**



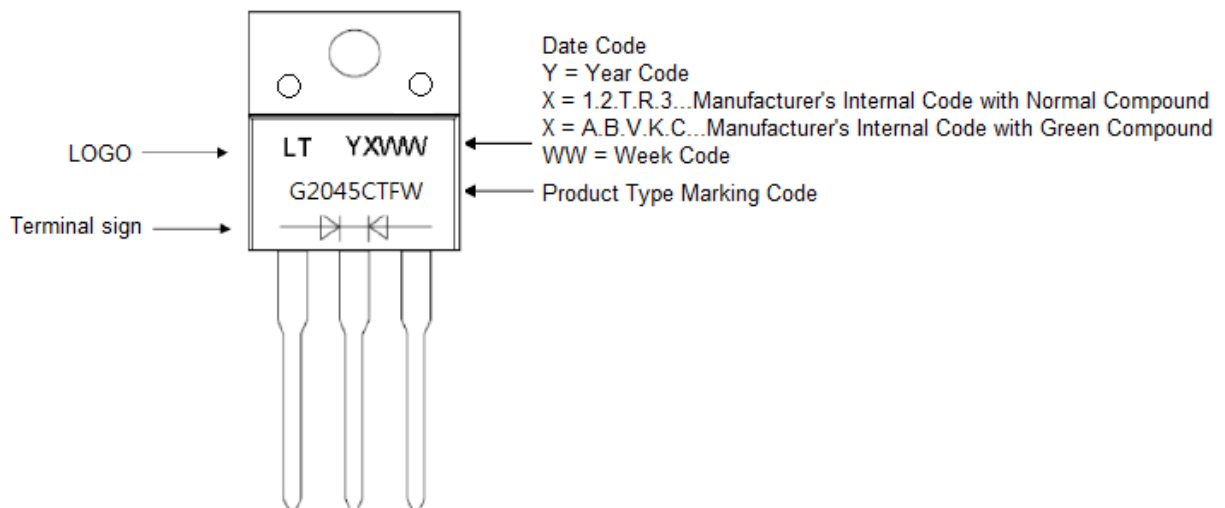
**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



## Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
G2045CTFW	ITO-220AB(WB)	50 pcs	Tube

## Marking Information:



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