

TRENCH SCHOTTKY RECTIFIER

REVERSE VOLTAGE – 150 Volts
FORWARD CURRENT – 10 Amperes

FEATURES

- Super Low Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- Qualified according to AEC-Q101 Rev_D
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

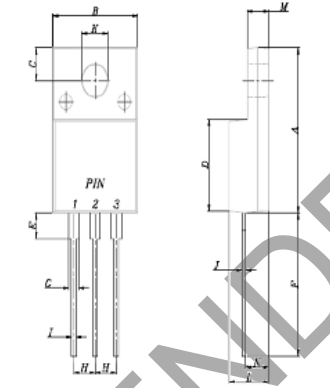
APPLICATIONS

- Devices optimized for ultra-low forward voltage drop to maximize efficiency in power supply applications

MECHANICAL DATA

- Package: JEDEC TO-220ABFP
- Package Material: "Green" Molding compound, UL flammability classification 94V-0, "Halogen-free".
- Lead free finish, RoHS compliant
- Marking code: G10H150CTFW
- Weight: 1.558 grams (Approximate)

ITO-220(S)AB



ITO-220(S)AB		
DIM	MIN	MAX
A	14.95	15.95
B	10.00	10.40
C	2.76	3.36
D	8.50	8.80
E	2.10	2.50
F	13.00	13.70
G	1.15	1.37
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

All dimension 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}	150	V
Maximum DC blocking voltage	V_{DC}	150	V
Maximum Average rectified forward current	I_{AV}	10	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	180	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)	$I_F = 5A$		$T_J = 25^\circ C$	0.79	V
			$T_J = 125^\circ C$	0.63	
Reverse leakage current	$V_R = 150V$		$T_J = 25^\circ C$	8	uA
			$T_J = 125^\circ C$	10	

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical junction capacitance (Note 5)	C_J	550	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	R_{thJL}	6	°C/W
	R_{thJC}	5	

- 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. 300µs 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 Aluminum fin-type heatsink (23mm x 20mm x 8.7mm).

RATING AND CHARACTERISTIC CURVES
G10H150CTFW

FIG.1 FORWARD CURRENT DERATING CURVE

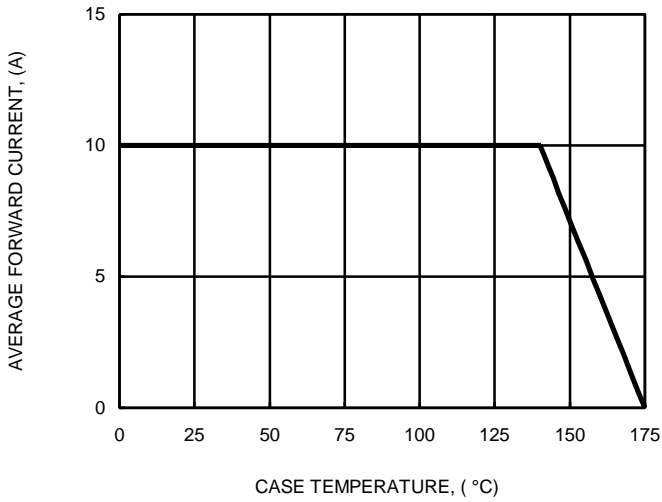


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

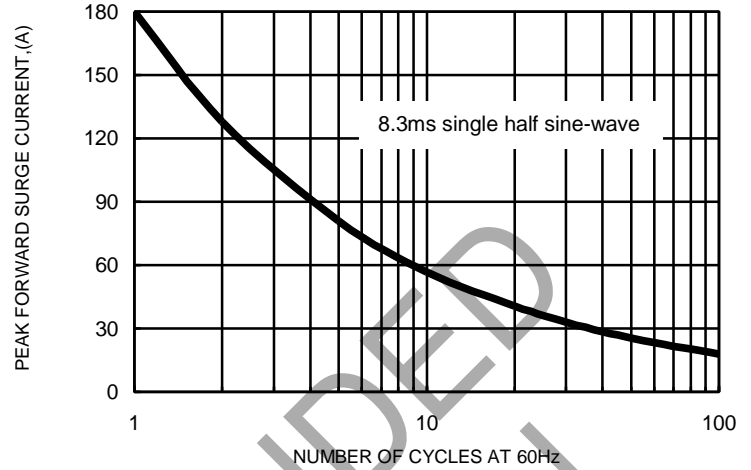


FIG.3 TYPICAL FORWARD CHARACTERISTICS

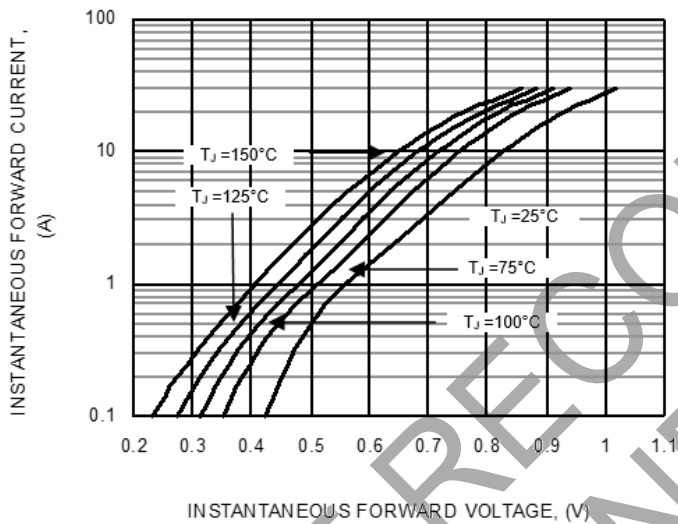


FIG.4 TYPICAL JUNCTION CAPACITANCE

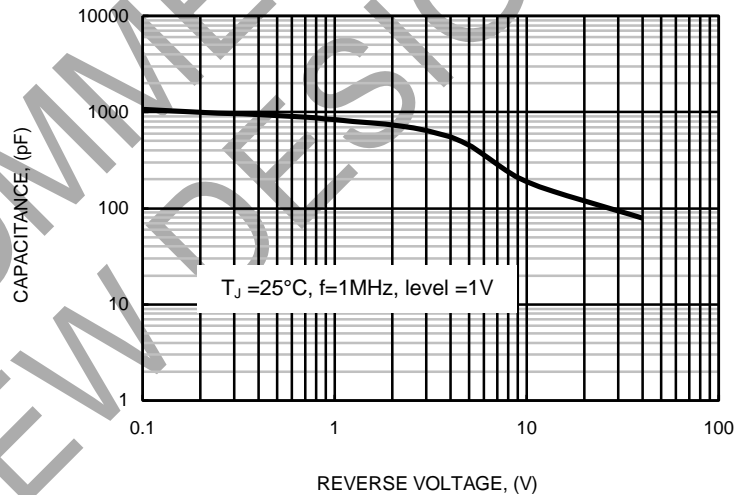


FIG.5 TYPICAL REVERSE CHARACTERISTICS

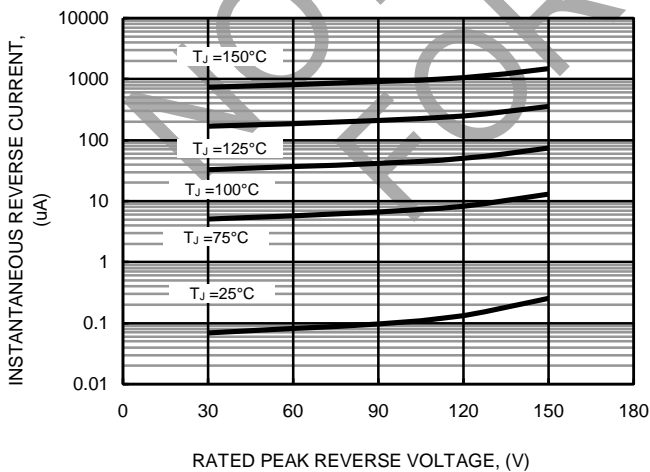
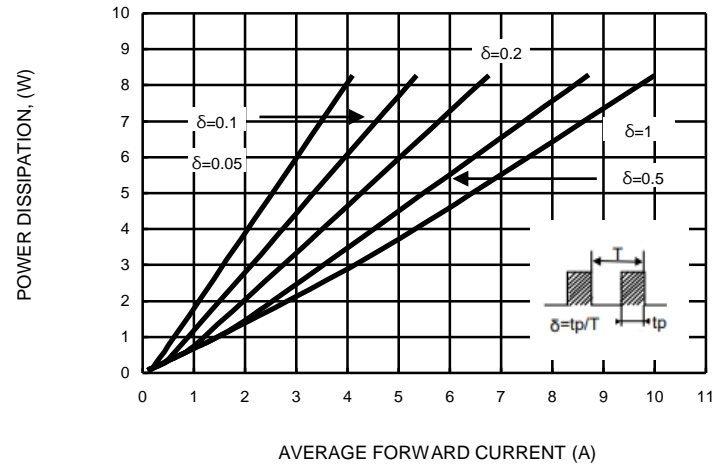
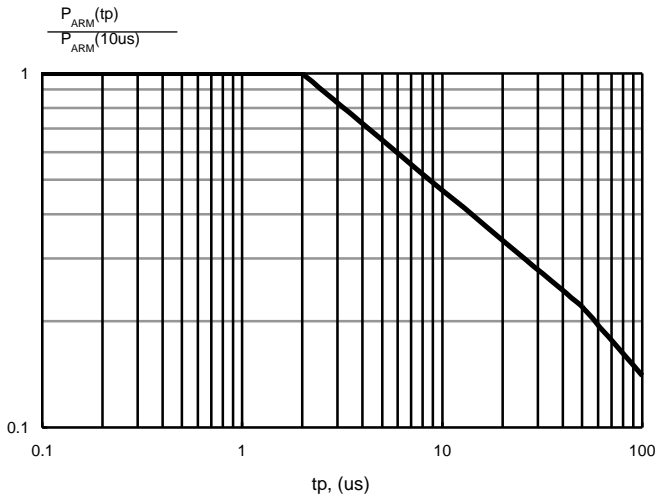


FIG.6- AVERAGE FORWARD POWER DISSIPATION VS AVERAGE FORWARD CURRENT



RATING AND CHARACTERISTIC CURVES
G10H150CTFW

**FIG.7- NORMALIZED AVALANCHE POWER
DERATING VERSUS PULSE DURATION**

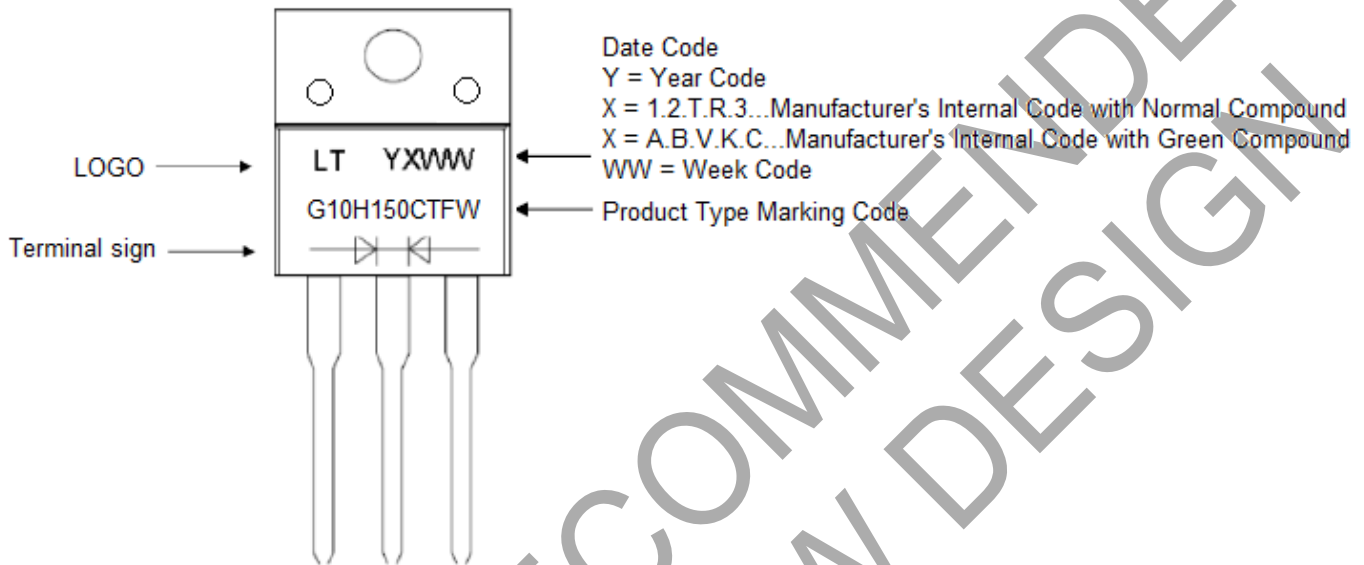


NOT RECOMMENDED
FOR NEW DESIGN

Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
G10H150CTFW	ITO-220(S)AB	50pcs	Tube

Marking Information:

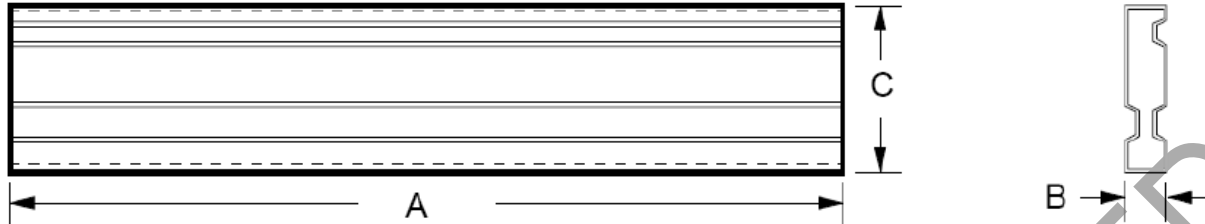


NOT RECOMMENDED
FOR NEW DESIGN

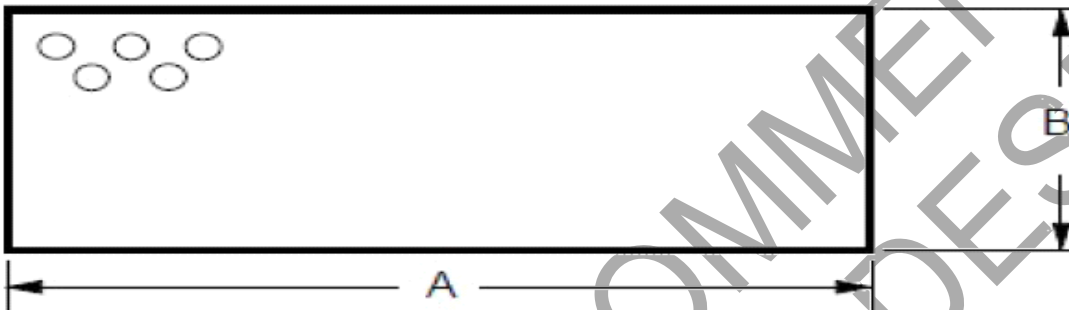
PACKAGING INFORMATION
G10H150CTFW

Packaging Information:

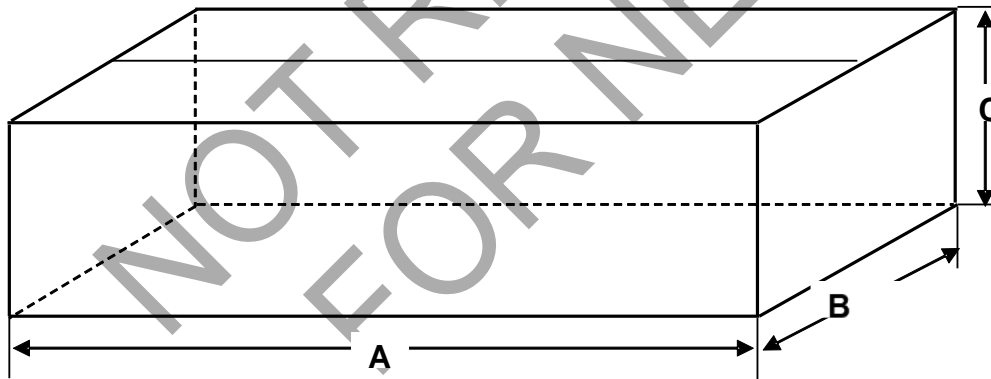
1. TUBE



2. AIR BAG



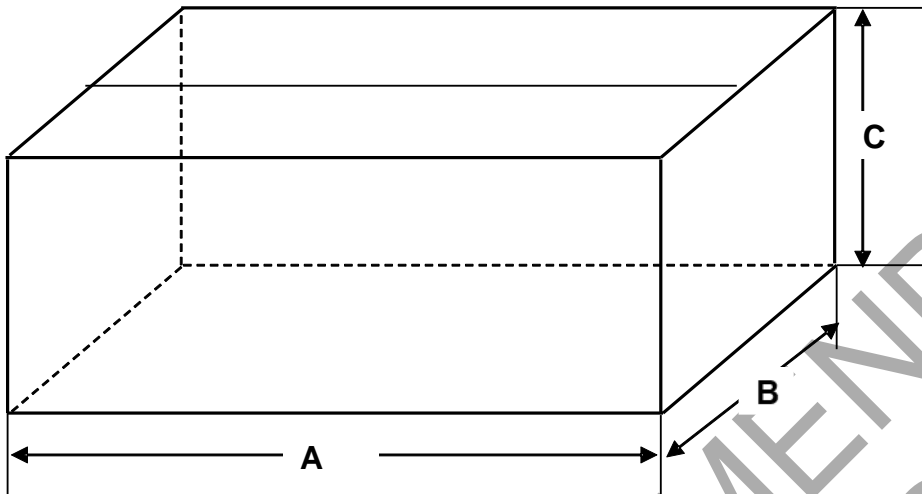
3. INNERBOX



PACKAGING INFORMATION
G10H150CTFW

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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