

TRENCH SCHOTTKY RECTIFIER

REVERSE VOLTAGE – 120 Volts
FORWARD CURRENT – 30 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)**

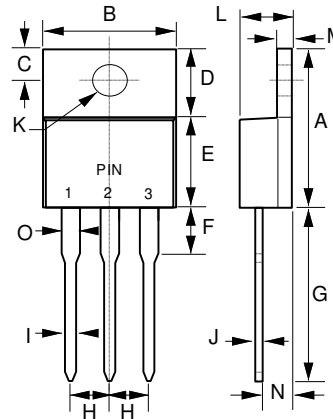
APPLICATION

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

MECHANICAL DATA

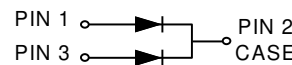
- Package: JEDEC TO-220AB
- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free"
- Lead Free Finish, RoHS Compliant
- Polarity: As marked on the body
- Weight: 0.07 ounces, 1.927grams (Approximate)
- Marking code: G30H120CTW

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 RATING

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	120	V
Maximum DC blocking voltage	V_{DC}	120	V
Maximum Average rectified forward current	$I_{(AV)}$	30	A
Non repetitive peak reverse current	I_{RSM}	3	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}	280	A
Operating Junction 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)	$I_F = 15A$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	V_F	-- 0.66	0.84 --	V
Reverse leakage current	$V_R = 120V$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R	-- 0.7	5 5	μA mA
Typical junction capacitance (Note 5)		C_J		980	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	R_{thJc} R_{thJl}	3 1	°C/W

- 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 4.0V DC.
 6. Thermal resistance test performed in accordance with JESD-51.
 7. The unit mounted on fin-type heatsink 45mm x 30mm x 23.8mm.

**RATING AND CHARACTERISTIC CURVES
G30H120CTW**

FIG.1- FORWARD CURRENT DERATING CURVE

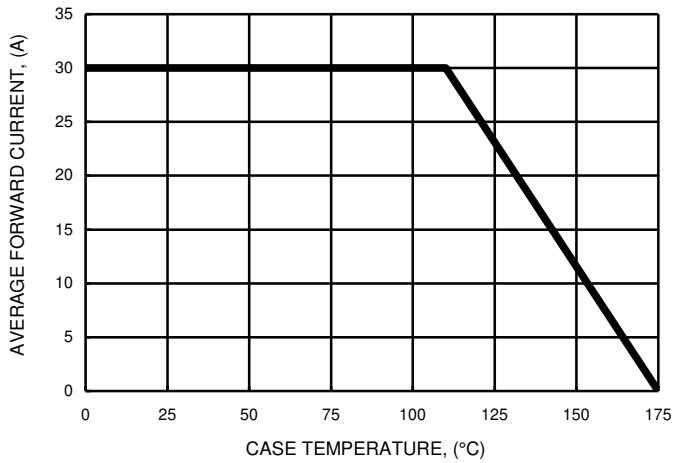


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

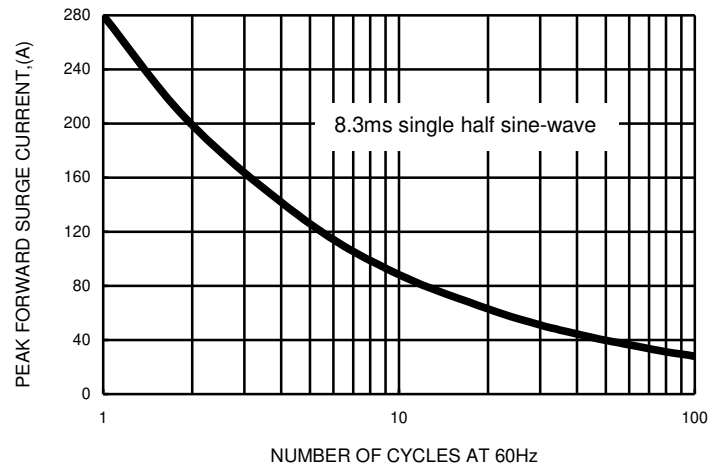


FIG.3- TYPICAL FORWARD CHARACTERISTICS

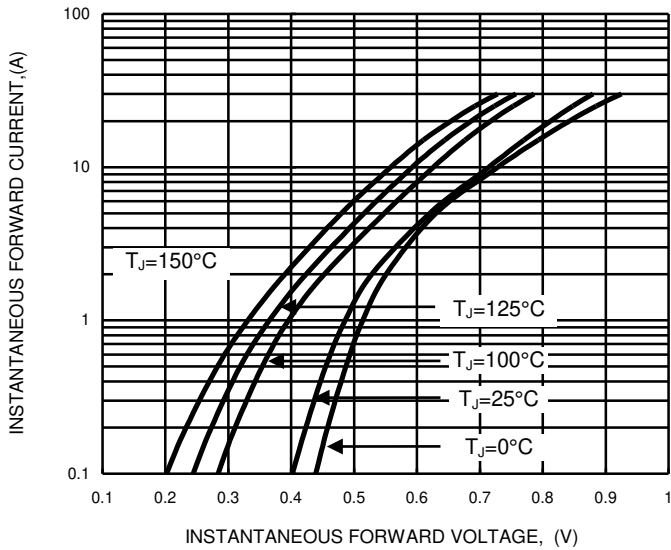


FIG.4- TYPICAL JUNCTION CAPACITANCE

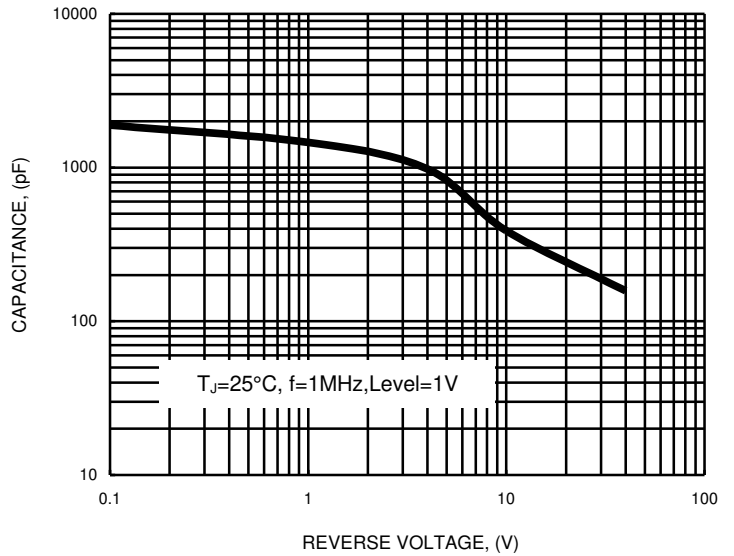
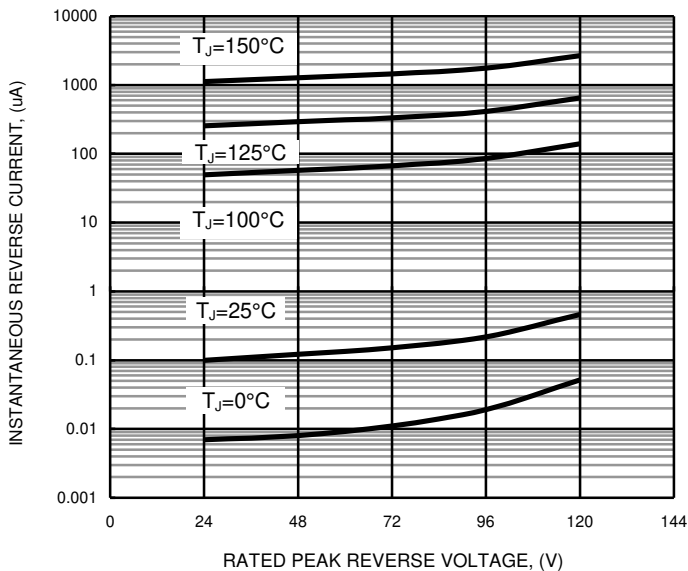


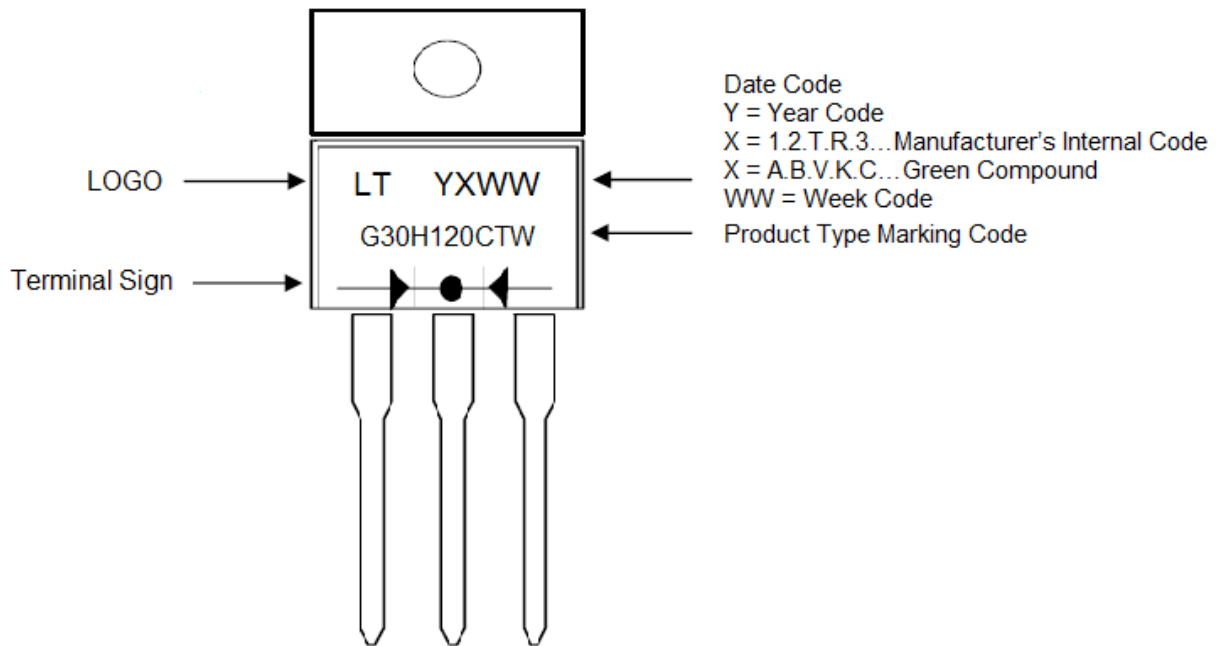
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
G30H120CTW	TO-220AB	50pcs	Tube

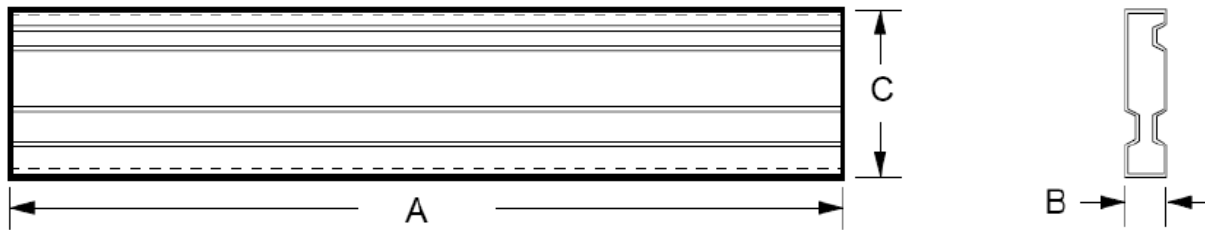
Marking Information:



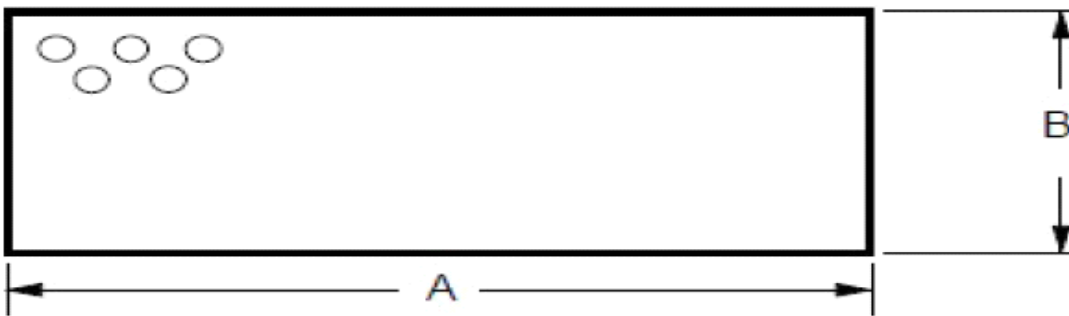
PACKAGING INFORMATION
G30H120CTW

Packaging Information:

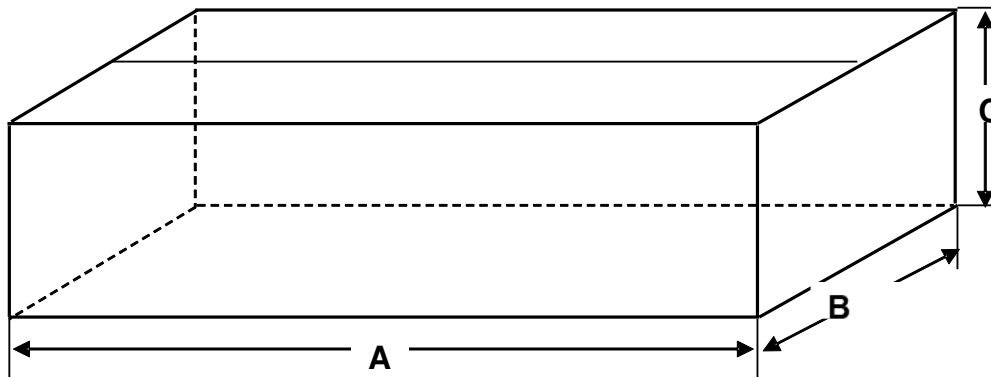
1. TUBE



2. AIR BAG



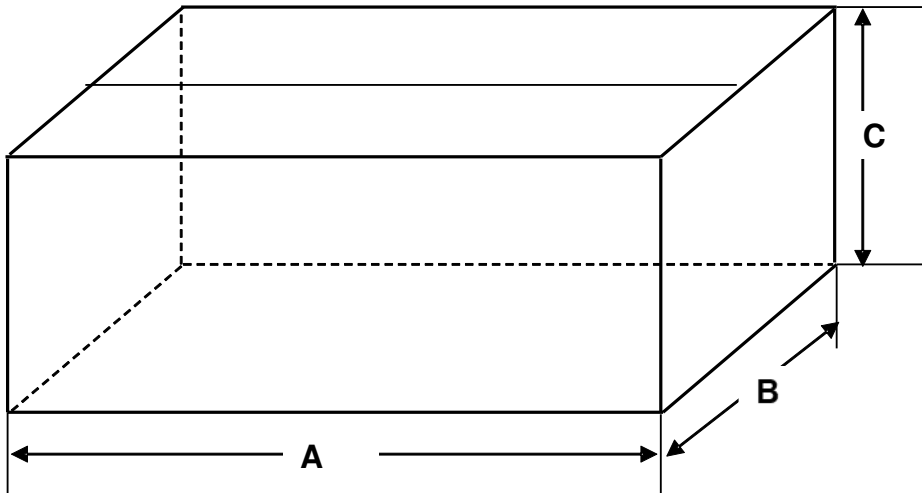
3. INNERBOX



PACKAGING INFORMATION
G30H120CTW

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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