



A Product Line of Diodes Incorporated

LITE-ON SEMICONDUCTOR

G40E100CTW

REVERSE VOLTAGE - 100 Volts TRENCH SCHOTTKY RECTIFIER FORWARD CURRENT - 40 Amperes **FEATURES** TO-220AB High efficiency TO-220AB Reduced high temperature reverse leakage DIM MIN MAX · Reduced ultra-low forward voltage drop A 14.40 15.20 С Qualification is according to AEC-Q101 Rev_C D В 9.65 10.67 4 • Lead-Free Finish; RoHS Compliant (Notes 1 & 2) С 2.54 3.43 ĸ D 5.84 6.86 Halogen and Antimony Free. "Green" Device (Note 3) Е Е 8.26 9.28 APPLICATION 4.20 F G 12.70 14.73 DC to DC converters O-I 2.29 2.79 Н • AC to DC adaptors 0.51 1.00 Т G J 0.30 0.64 **MECHANICAL DATA** Κ 3.53Φ 4.09Φ Package: JEDEC TO-220AB 3.56 4.83 L Package Material: "Green" molding compound, UL Μ 1.14 1.40 2.92 Ν 2.03 flammability classification 94V-0, "Halogen-free" 0 1.14 1.37 • Weight: 1.927 grams (Approximate) PIN 2 All Dimensions in millimeter Marking Code: G40E100CTW PIN 3 a CASE 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 output current	@T _c =110°C	I _(AV)	40	А
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I _{FSM}	300	А
Non-repetitive peak reverse current	@tp=2us	I _{RSM}	3	А
Operating junction and storage temperature range		$T_{J,} T_{STG}$	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	ТҮР	MAX	UNIT
Forward voltage (Note 4)	I _F =20A	T _J =25°C T _J =125°C	V _F		0.71 0.64	V
Leakage current	V _R =100V	T _J =25°C T _J =125°C	I _R	 17.3	100 30	uA mA
Typical junction capacitance (Note 5)		CJ	990		pF	

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	ТҮР	UNIT
Typical thermal resistance (Notes 6, 7)	RthJ _c	1.5	°C/W
	RthJ∟	1	0/11

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.

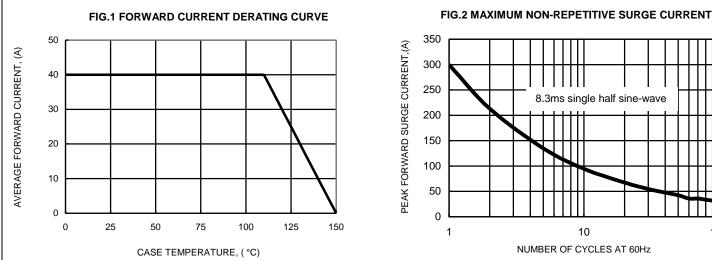
5. Measured at 1.0MHz and applied voltage of 4.0V DC.

6. Thermal resistance test performed in accordance with JESD-51.

7. The unit mounted on fin type heatsink (85.2mm x 32mm x 24mm) in free air condition.



RATING AND CHARACTERISTIC CURVES G40E100CTW



LITE-ON SEMICONDUCTOR

8.3ms single half sine-wave

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NUMBER OF CYCLES AT 60Hz

100

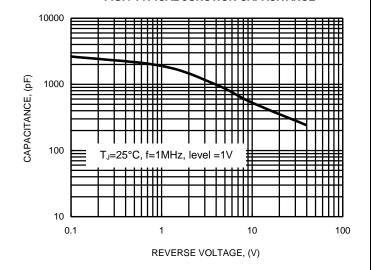
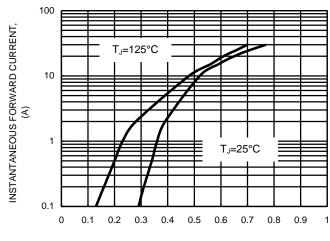


FIG.3 TYPICAL FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, (V)

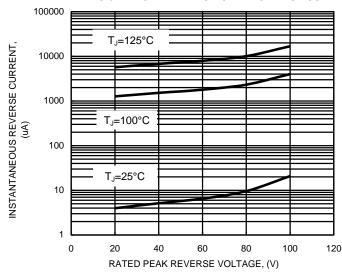


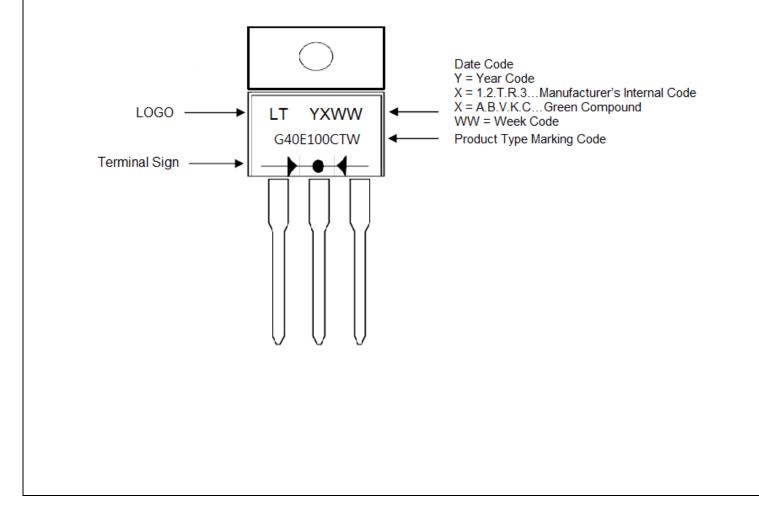
FIG.5 TYPICAL REVERSE CHARACTERISTICS



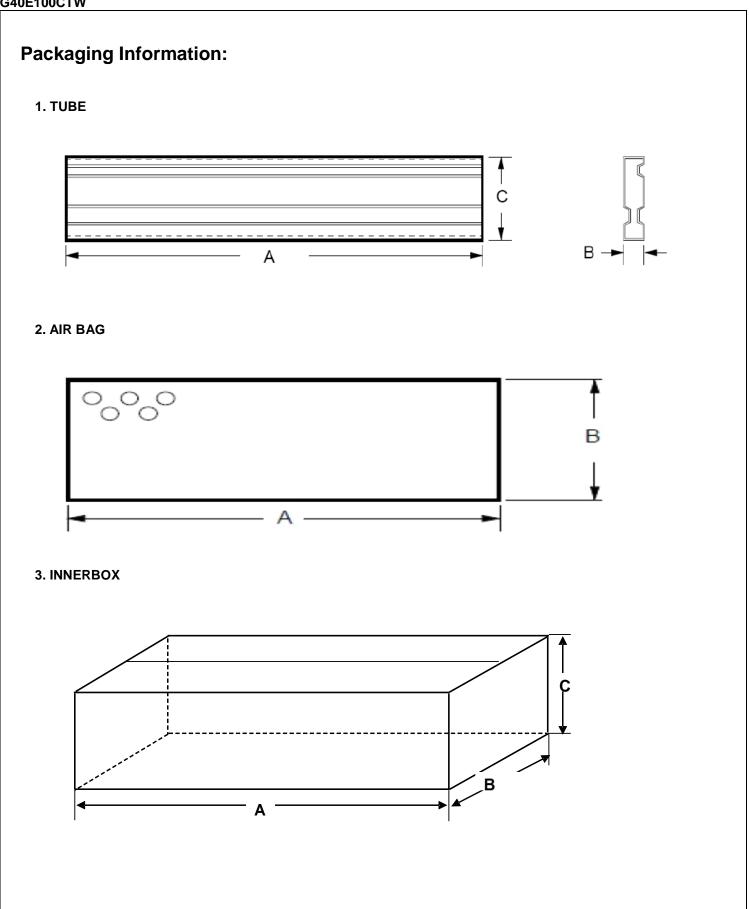
Ordering Information:

Port Number	Packago	Packing		
Part Number	Package	Qty.	Carrier	
G40E100CTW	TO-220AB	50 pcs	Tube	

Marking Information:



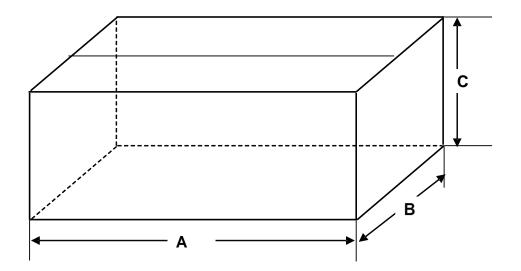






Packaging Information:

4. CARTON



Unit:mm

P/N	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	Q'ty/per	REMARK
TUBE	536	5.6	31.8	50	1
AIR BAG	800	550	/	1	/
INNERBOX	555	165	105	2000	40TUBE
CARTON	575	179	225	4K	2 INNER BOX



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