G30E100DW

SURFACE MOUNT TRENCH SCHOTTKY RECTIFIER

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 30 Amperes

FEATURES

- Reduced leakage current
- Low forward drop voltage
- High-Frequency Operation
- Qualified according to AEC-Q101 Rev_C
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

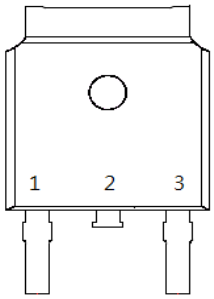
APPLICATION

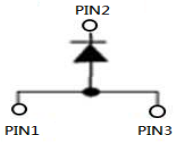
- Adapters
- Chargers

MECHANICAL DATA

- Package: JEDEC TO-252
- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Moisture Sensitivity Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.347 grams (Approximate)
- Marking code: G30E100DW

DPAK





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=100°C	$I_{(AV)}$	30	A
Peak forward surge current 10 ms single half sine-wave superimposed on rated load.		I_{FSM}	150	A
Operating junction and Storage Temperature range		T_J, T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	I_F=3A	T_J=25°C	V_F	--	0.450	V
		T_J=50°C		0.407	--	
		T_J=125°C		0.327	0.405	
	I_F=10A	T_J=25°C		--	0.620	
	I_F=30A	T_J=25°C		--	0.890	
		T_J=125°C		0.680	0.745	
Reverse Leakage current	V_R=100V	T_J=25°C	I_R	--	50	uA
		T_J=125°C		12	16	mA

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical junction capacitance (Note 5)	C_J	1090	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6, 7)	$RthJ_C$	2	°C/W
	$RthJ_L$	2	

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 voltage of 4.0V DC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on Copper heatsink (250mm x 250mmm x 10mm).

RATING AND CHARACTERISTIC CURVES
G30E100DW

FIG.1 FORWARD CURRENT DERATING CURVE

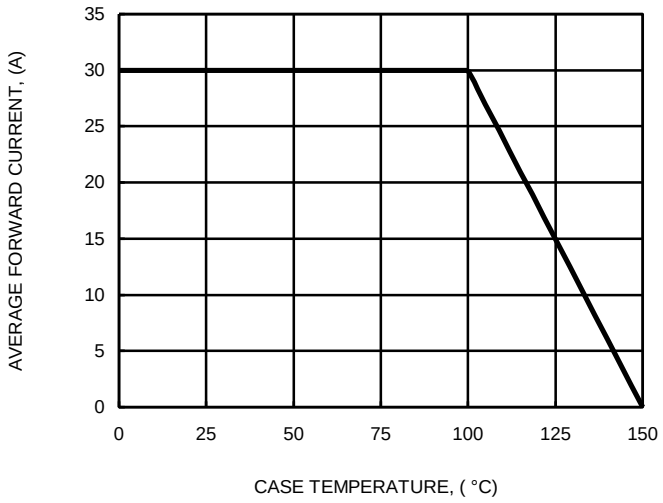


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

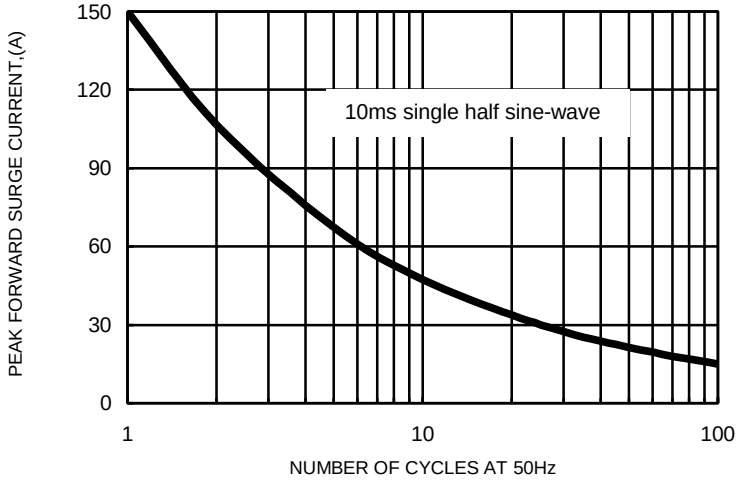


FIG.3 TYPICAL FORWARD CHARACTERISTICS

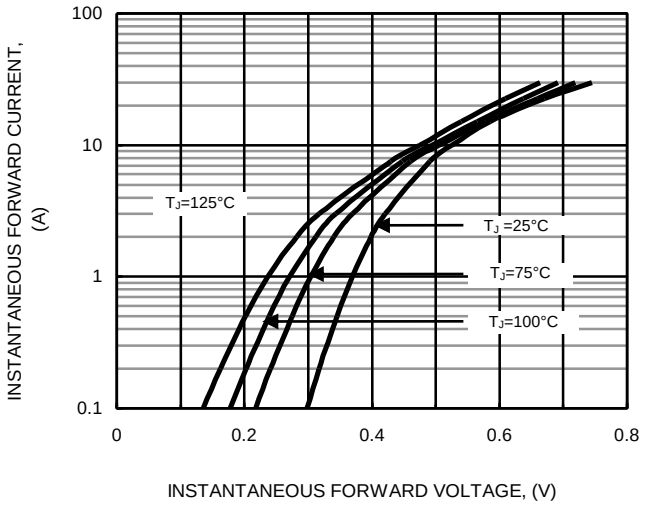


FIG.4 TYPICAL JUNCTION CAPACITANCE

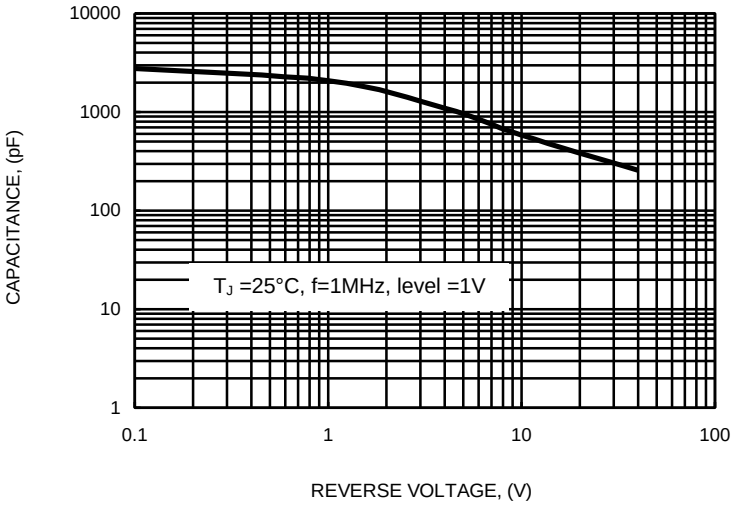


FIG.5 TYPICAL REVERSE CHARACTERISTICS

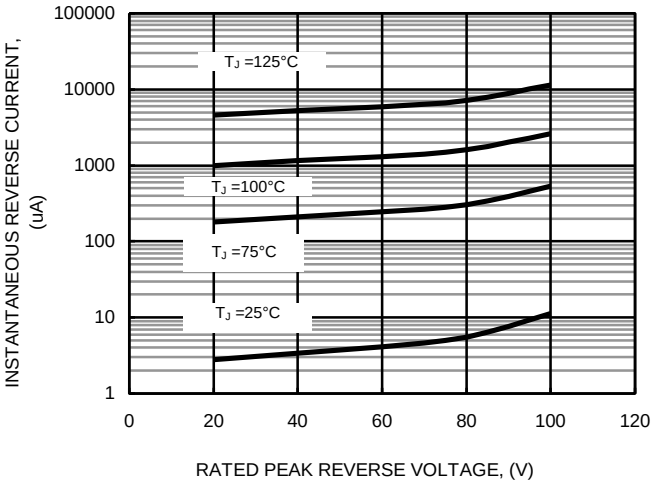
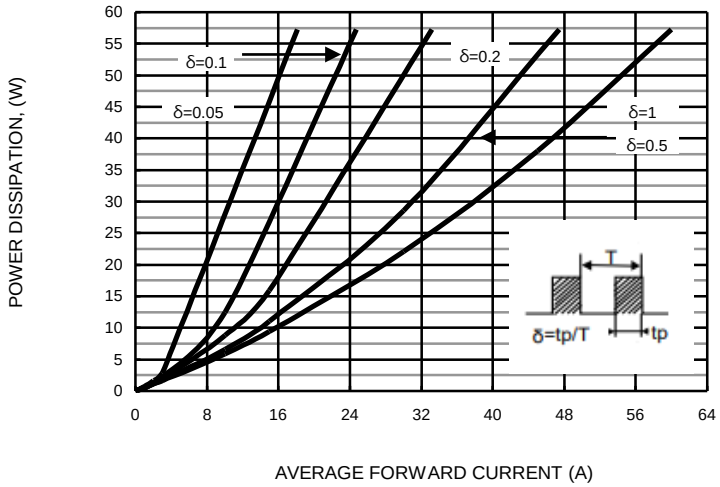


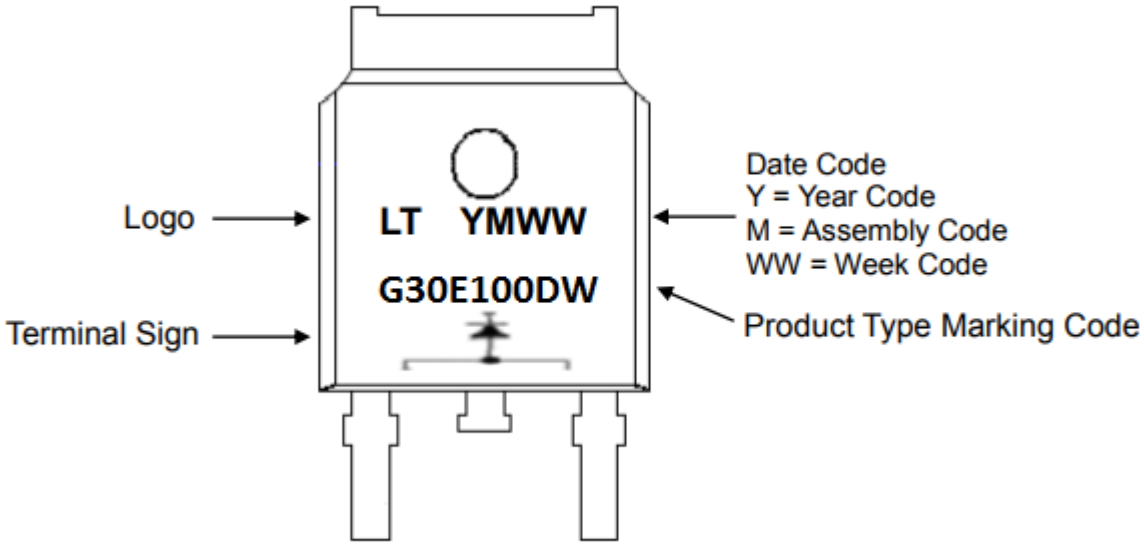
FIG.6- AVERAGE FORWARD POWER DISSIPATION VS AVERAGE FORWARD CURRENT



Ordering Information:

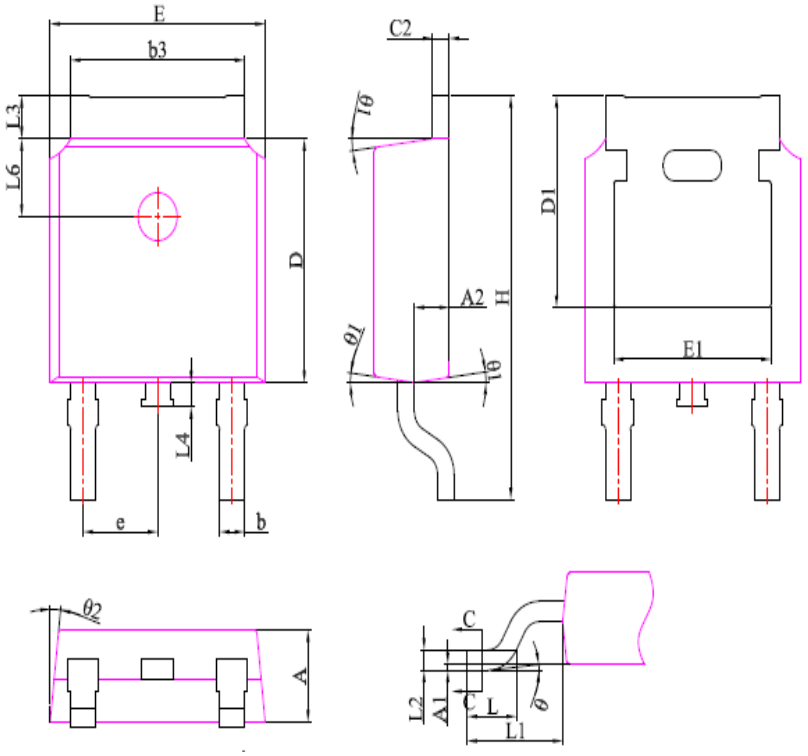
Part Number	Package	Packing	
		Qty.	Carrier
G30E100DW	DPAK	2500 pcs	Tape & Reel

Marking Information:

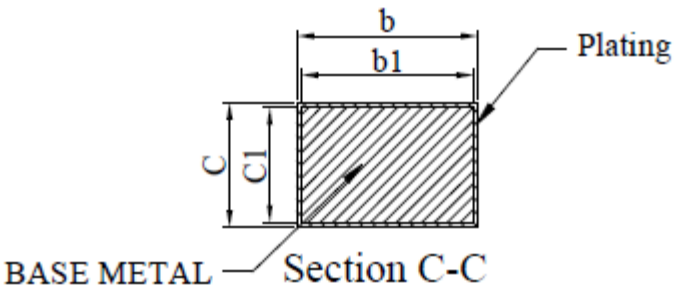


Package Dimension :

TO-252



TO-252			
DIM	MIN	TYP	MAX
A	2.20	2.30	2.40
A1	0.00	--	0.15
A2	0.97	1.07	1.17
b	0.68	0.78	0.90
b1	0.66	0.76	0.88
b3	5.20	5.33	5.50
C	0.43	0.53	0.63
C1	0.41	0.51	0.61
C2	0.43	0.53	0.63
D	5.98	6.10	6.22
D1	5.30 REF		
E	6.40	6.60	6.80
E1	4.63	4.83	5.03
e	2.286 REF		
H	9.40	10.10	10.50
L	1.38	1.50	1.75
L1	2.90 REF		
L2	0.51 BSC		
L3	0.88	--	1.28
L4	--	--	1.00
L6	1.65	1.80	1.95
Θ	0°	--	8°
Θ1	5°	7°	9°
Θ2	5°	7°	9°
All dimension in millimeter			



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