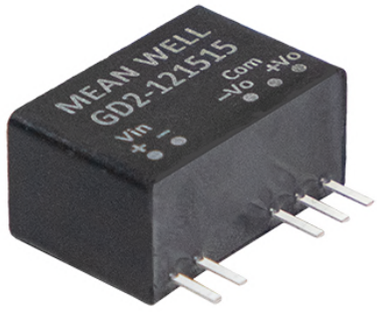
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2W SIP Package IGBT Sic Gate Driver Power DC-DC Converter GD2 series



UL62368-1 TPTC004

Automate Industrial Security Network Telecom

Features

- SIP7 package with international standard pinout
- Operating temperature range -40 ~ +90℃
- Performance optimized for IGBT/SiC
- Bipolar asymmetric unregulated output
- Low coupling isolation capacitance(Cio)
- Protections: Short circuit (Continuous)
- 6.2KVdc or 4.3KVac hight I/O isolation
- Low cost
- 3 years warranty

Applications

- Server telecom / datacom system
- Wireless network
- Industrial control facility
- Industrial robotics
- Motor drivers
- Solar inverters
- Induction Heating

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

GD2 series is 2W isolated and unregulated module type DC-DC converter with SIP7 package. It features international standard pins, a high efficiency up to 82%, wide working temperature range -40~+90℃, 6.2KVdc or 4.3KVac I/P-O/P hight isolation voltage, short circuit protection, etc. The models account for different input voltage 12V/15V/24V± 10%, and a variety of different output positive and negative voltages, which are suitable for ultra low leakage current, industrial control, telecommunication field, Motor drivers and solar inverters, distributed power architecture, and so on.

Model Encoding

GD 2 – 12 15 03

- 03: Output negative voltage (-3/-3.5/-5/-9/-15Vdc)
- 15: Output positive voltage (15/17/18/20Vdc)
- 12: Input voltage (12: 10.8 ~ 13.2Vdc，15: 13.5 ~ 16.5Vdc，24: 21.6 ~ 26.4Vdc)
- 2: Rated wattage
- GD: Series name

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MODEL SELECTION TABLE

ORDER NO.	INPUT			OUTPUT		EFFICIENCY (TYP.)	CAPACITOR LOAD (MAX.)
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT VOLTAGE	OUTPUT CURRENT		
		NO LOAD	FULL LOAD				
GD2-121503	Normal 12V (10.8 ~ 13.2V)	43mA	217mA	+15V/-3V	+11 ~ 110mA /-10 ~ 100mA	79%	100μF
GD2-121505		43mA	217mA	+15V/-5V	+10 ~ 100mA /-10 ~ 100mA	80%	100μF
GD2-121805		43mA	217mA	+18V/-5V	+9 ~ 90mA /-9 ~ 90mA	81%	100μF
GD2-12203.5		43mA	217mA	+20V/-3.5V	+9 ~ 90mA /-8 ~ 80mA	80%	100μF
GD2-122005		43mA	217mA	+20V/-5V	+8 ~ 80mA /-8 ~ 80mA	79%	100μF
GD2-121509		43mA	217mA	+15V/-9V	+10 ~ 100mA /-6 ~ 60mA	82%	100μF
GD2-121709		43mA	217mA	+17V/-9V	+9 ~ 90mA /-5 ~ 50mA	79%	100μF
GD2-121809		43mA	217mA	+18V/-9V	+9 ~ 90mA /-5 ~ 50mA	79%	100μF
GD2-121515		43mA	217mA	+15V/-15V	+7 ~ 67mA /-7 ~ 67mA	79%	100μF
GD2-151503	Normal 15V (13.5 ~ 16.5V)	35mA	172mA	+15V/-3V	+11 ~ 110mA /-10 ~ 100mA	79%	100μF
GD2-151505		35mA	172mA	+15V/-5V	+10 ~ 100mA /-10 ~ 100mA	78%	100μF
GD2-151805		35mA	172mA	+18V/-5V	+9 ~ 90mA /-9 ~ 90mA	81%	100μF
GD2-15203.5		35mA	172mA	+20V/-3.5V	+9 ~ 90mA /-8 ~ 80mA	81%	100μF
GD2-152005		35mA	172mA	+20V/-5V	+8 ~ 80mA /-8 ~ 80mA	78%	100μF
GD2-151509		35mA	172mA	+15V/-9V	+10 ~ 100mA /-6 ~ 60mA	78%	100μF
GD2-151709		35mA	172mA	+17V/-9V	+9 ~ 90mA /-5 ~ 50mA	81%	100μF
GD2-151809		35mA	172mA	+18V/-9V	+9 ~ 90mA /-5 ~ 50mA	79%	100μF
GD2-151515		35mA	172mA	+15V/-15V	+7 ~ 67mA /-7 ~ 67mA	78%	100μF
GD2-241503	Normal 24V (21.6 ~ 26.4V)	19mA	108mA	+15V/-3V	+11 ~ 110mA /-10 ~ 100mA	81%	100μF
GD2-241505		19mA	108mA	+15V/-5V	+10 ~ 100mA /-10 ~ 100mA	80%	100μF
GD2-241805		19mA	108mA	+18V/-5V	+9 ~ 90mA /-9 ~ 90mA	82%	100μF
GD2-24203.5		19mA	108mA	+20V/-3.5V	+9 ~ 90mA /-8 ~ 80mA	79%	100μF
GD2-242005		19mA	108mA	+20V/-5V	+8 ~ 80mA /-8 ~ 80mA	80%	100μF
GD2-241509		19mA	108mA	+15V/-9V	+10 ~ 100mA /-6 ~ 60mA	81%	100μF
GD2-241709		19mA	108mA	+17V/-9V	+9 ~ 90mA /-5 ~ 50mA	80%	100μF
GD2-241809		19mA	108mA	+18V/-9V	+9 ~ 90mA /-5 ~ 50mA	80%	100μF
GD2-241515		19mA	108mA	+15V/-15V	+7 ~ 67mA /-7 ~ 67mA	79%	100μF

* For each output

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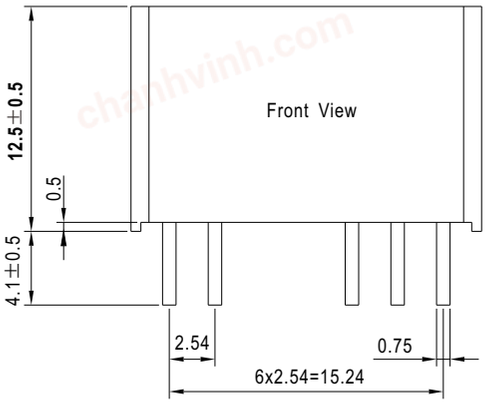
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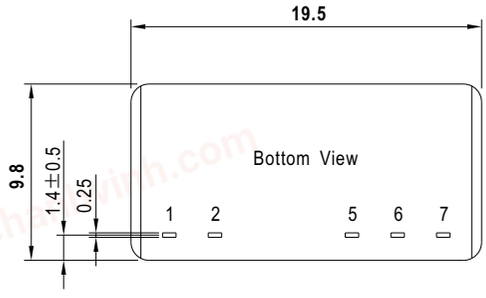
SPECIFICATION				
INPUT	VOLTAGE RANGE	12: 10.8 ~ 13.2Vdc, 15: 13.5 ~ 16.5Vdc, 24: 21.6 ~ 26.4Vdc		
	FILTER	Internal capacitor		
	PROTECTION	Fuse recommended. 500mA Slow-Blow Type for all models		
	START UP TIME	100ms max.		
OUTPUT	VOLTAGE ACCURACY	±5.0% ; +20Vo for -8% ~ +2%		
	RATED POWER	2W		
	RIPPLE & NOISE Note.2	50mVp-p		
	LINE REGULATION Note.3	1.2% for 1% input variation		
	LOAD REGULATION Note.4	±5%		
	SWITCHING FREQUENCY (Typ.)	20 ~ 130KHz 100% load at Normal Vin		
PROTECTION	SHORT CIRCUIT	Protection type : Continuous, automatic recovery		
ENVIRONMENT	COOLING	Free-air convection		
	WORKING TEMP.	-40 ~ +90℃ (Refer to "Derating Curve")		
	CASE TEMPERATURE	+115℃		
	WORKING HUMIDITY	20% ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-55 ~ +125℃, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	0.02% / ℃ (0 ~ 90℃)		
	SOLDERING TEMPERATURE	1.5mm from case of 1 ~ 3sec./260℃ max.		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
SAFETY & EMC (Note.5)	SAFETY STANDARDS	UL62368-1, EAC TP TC 020/2011 approved		
	WITHSTAND VOLTAGE	I/P-O/P:6.2KVdc (60 sec.) or I/P-O/P:7.2KVdc (2 sec.)		
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH		
	ISOLATION CAPACITANCE (Typ.)	5pF		
	EMC EMISSION	**Parameter**	**Standard**	**Test Level / Note**
		Conducted	BS EN/EN55032	Class A/B with external components
		Radiated	BS EN/EN55032	Class A/B with external components
	EMC IMMUNITY	**Parameter**	**Standard**	**Test Level / Note**
		ESD	BS EN/EN61000-4-2	Level 4, ±8KV contact, Level 3, ±15KV air
		Radiated Susceptibility	BS EN/EN61000-4-3	Level 3, 10V/m
		EFT/Bursts	BS EN/EN61000-4-4	Level 3, 2KV
		Surge	BS EN/EN61000-4-5	Level 4, 2KV L-N
		Conducted	BS EN/EN61000-4-6	Level 3, 10Vrms
		Magnetic Field	BS EN/EN61000-4-8	Level 5, 100A/m
OTHERS	MTBF	13980Khrs MIL-HDBK-217F(25℃)		
	DIMENSION (L*W*H)	19.5*9.8*12.5mm		
	CASE MATERIAL	Non-Conductive black plastic (UL 94V-0 rated)		
	PACKING	4g ; 25pcs/per tube, 1875pcs/75 tube/per carton		
NOTE	1.All parameters are specified at normal input, rated load, 25℃ 70% RH ambient. 2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf & 47μf capacitor. 3.Line regulation is measured from low line to high line at rated load. 4.Load regulation is measured from 10% to 100% rated load. 5.The final equipment must be re-confirm that it still meet EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.”(as available on http://www.meanwell.com) ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx			

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■ Mechanical Specification

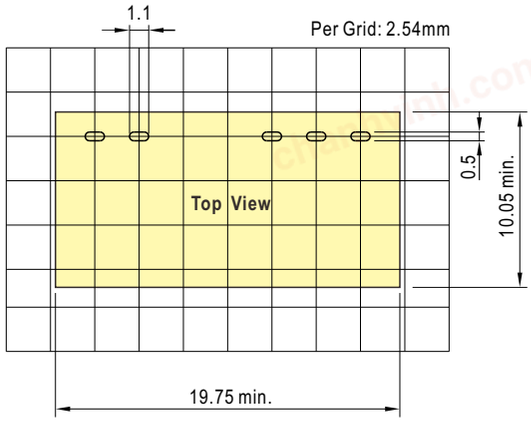
- All dimensions in mm(inch)
- Tolerance:x.x±0.25mm(±0.001")
- Pin tolerance:±0.1mm(±0.004")





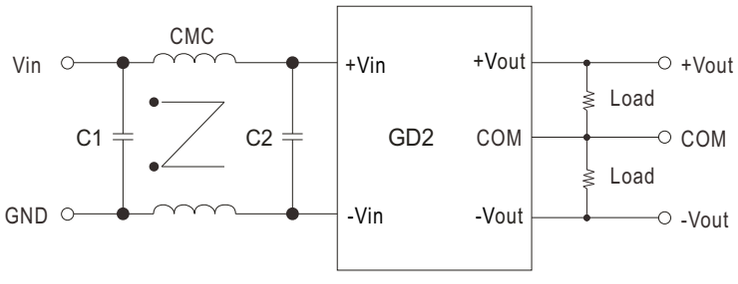
■ Plug Assignment

Pin-Out	
Pin No.	**Output**
1	+Vin
2	-Vin
5	-Vout
6	Common
7	+Vout



■ EMC Suggestion

EMC typical recommended circuit (Class A/B)

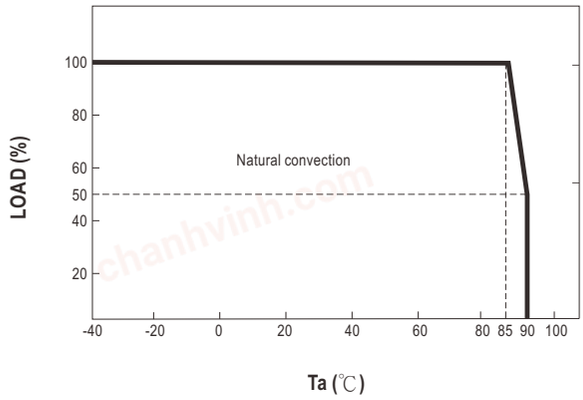


Recommended typical circuit parameters:

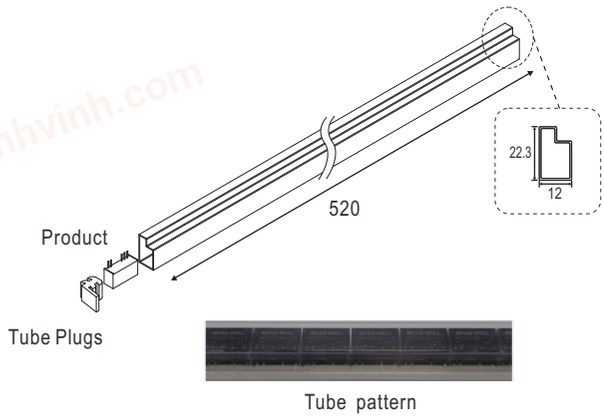
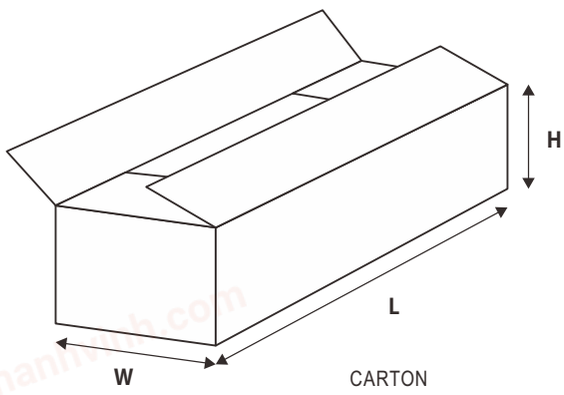
Input	C1	CMC	C2
12V	10μF	0.9mH	10μF
15V			
24V			

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■ Derating Curve



■ Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Unit : mm  Tube pattern  CARTON L545 x W145 x H220	25	140g	1875	11Kg

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html