

TECHNICAL DATA  
DATA SHEET 1104, REV. -

## DC-DC Converters

### Wide Input (2:1), 1000V Isolation, Regulated

**FEATURES:**

- Isolation Voltage: 1000Vdc
- Isolation Resistance (1): 1GW
- Isolation Capacitance: 100pF
- Short-Circuit Duration: Continuous
- Case Temperature Rise: Max. 25° C, Typ. 15° C
- Cooling Method: Free-Air Cooling
- Operating Temp.: -40° C ~ + 85° C
- Storage Temp.: -50° C ~ + 125° C
- Humidity:  $\leq$  95%
- Soldering Temp. (2): 300° C
- Case Material: Non-Flammable Material (UL94-V0)
- Mean Time Before Failure: > 1,090,000 hours (Operating Temp. 25° C)



**W-1W/2W/3W Series Input Characteristics**

Part Number	Nominal Input Voltage	Input Voltage Range	Maximum Input Voltage*
W05XXH/GD2/3	5Vdc	4.5~9Vdc	11Vdc
W12XXH/GD2/3	12Vdc	9~18Vdc	22Vdc
W15XXH/GD2/3	15Vdc	12~24Vdc	30Vdc
W24XXH/GD2/3	24Vdc	18~36Vdc	40Vdc
W48XXH/GD2/3	48Vdc	36~72Vdc	80Vdc

\* Voltage above this value may cause permanent damage to the device.

**W-1W/2W/3W Series Output Characteristics**

Parameter	MIN	TYP	MAX	Units
Output Power			3	W
Output Voltage Accuracy		$\pm$ 1	$\pm$ 3	%
Efficiency at 25% Load	60	65	70	%
Efficiency at 100% Load	65	75	83	%
Voltage Regulation		0.1	0.2	%
Vout (+) Load Regulation		0.2	0.5	%
Vout (-) Load Regulation		3	5	%
Temperature Coefficient			0.02	%/°C
Ripple		10	20	mVp-p
Noise		50	100	
Switching Frequency at 100% Load	80		200	kHz
Switching Frequency at 25% Load	250		550	kHz

1. All specifications at TA=25°C, 75% of the humidity, Nominal input voltage, full output load unless otherwise specified.
2. Soldering for 10 seconds at 1.5mm away from the edge.

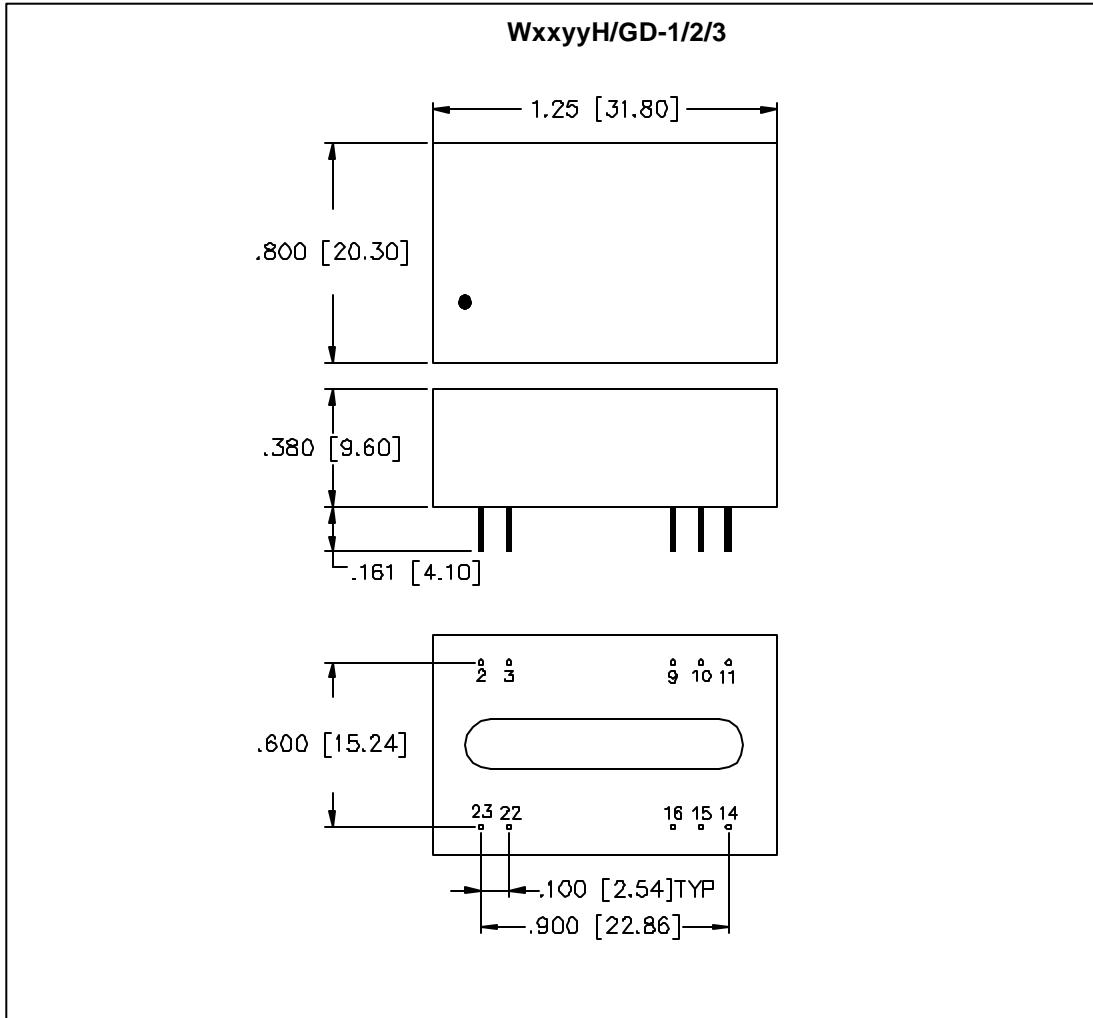
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W-1W/2W/3W Series Part Number List

Input	Output	Power	Single-1/2W	Single-3W	Dual-2W	Dual-3W
5Vdc	3.3V/300mA 5V/300mA	1.00W 1.50W	W0503HD1	W0503HD2	-	-
			W0505HD2	-	W0505GD2	-
			W0509HD2	-	W0509GD2	-
			W0512HD2	-	W0512GD2	-
			W0515HD2	-	W0515GD2	-
12Vdc	9V/222mA 12V/167mA 15V/133mA ±5V/200mA ±9V/111mA	2.00W 2.00W 2.00W 2.00W 2.00W	W1203HD1	W1203HD2	-	-
			W1205HD2	W1205HD3	W1205GD2	W1205GD3
			W1209HD2	W1209HD3	W1209GD2	W1209GD3
			W1212HD2	W1212HD3	W1212GD2	W1212GD3
			W1215HD2	W1215HD3	W1215GD2	W1215GD3
15Vdc	±12V/83mA ±15V/67mA 3.3V/500mA 5V/500mA	2.00W 2.00W 1.65W 2.50W	W1503HD1	W1503HD2	-	-
			W1505HD2	W1505HD3	W1505GD2	W1505GD3
			W1509HD2	W1509HD3	W1509GD2	W1509GD3
			W1512HD2	W1512HD3	W1512GD2	W1512GD3
			W1515HD2	W1515HD3	W1515GD2	W1515GD3
24Vdc	9V/330mA 12V/250mA 15V/200mA ±5V/300mA ±9V/160mA	3.00W 3.00W 3.00W 3.00W 3.00W	W2403HD1	W2403HD2	-	-
			W2405HD2	W2405HD3	W2405GD2	W2405GD3
			W2409HD2	W2409HD3	W2409GD2	W2409GD3
			W2412HD2	W2412HD3	W2412GD2	W2412GD3
			W2415HD2	W2415HD3	W2415GD2	W2415GD3
48Vdc	±12V/125mA ±15V/100mA	3.00W 3.00W	W4803HD1	W4803HD2	-	-
			W4805HD2	W4805HD3	W4805GD2	W4805GD3
			W4809HD2	W4809HD3	W4809GD2	W4809GD3
			W4812HD2	W4812HD3	W4812GD2	W4812GD3
			W4815HD2	W4815HD3	W4815GD2	W4815GD3

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**Mechanical Dimension: in inches / (mm) & Pin Configuration**



**PIN CONFIGURATION**

Pin	Single	Dual
2	GND	GND
3	GND	GND
9	NC	OV
10	NC	NC
11	NC	-Vo
14	+Vo	+Vo
15	NC	NC
16	OV	OV
22	Vin	Vin
23	Vin	Vin