

TECHNICAL DATA  
DATA SHEET 1109, REV. -

## DC-DC Converters

### Wide Input (2:1), Non- Isolated, Regulated, Single Output

**FEATURES:**

- **Short-Circuit Duration:** 1 second
- **Case Temperature Rise:** Max. 25° C, Typ. 15° C
- **Cooling Method:** Free-Air Cooling
- **Operating Temp.:** -40° C ~ +85° C
- **Storage Temp.:** -55° C ~ +125° C
- **Humidity:** ± 95%
- **Soldering Temp. (1):** 300° C
- **Case Material:** Non-Flammable Material (UL94-V0)
- **Mean Time Before Failure:** > 200,000 hours (Operating Temp. 25° C)

**P-1W Single Output Series Input Characteristics**

Part Number	Nominal Input Voltage	Input Voltage Range
P01XXHS/D1	1.5Vdc	0.9~1.8Vdc
P03XXHS/D1	3Vdc	1.8~3.6Vdc
P05XXHS/D1	5Vdc	2.7~5.4Vdc
P06XXHS/D1	6Vdc	4.5~9.0Vdc
P09XXHS/D1	9Vdc	6~12Vdc
P12XXHS/D1	12Vdc	9~18Vdc
P24XXHS/D1	24Vdc	18~36Vdc

**P-1W Single Output Series Output Characteristics**

Parameter	MIN	TYP	MAX	Units
0.5W Output Power			0.5	W
1W Output Power			1	W
Power Consumption			1	mW
Voltage Regulation			± 0.2	%
Line Regulation			± 0.2	%
Output Voltage Accuracy		± 1	± 3	%
Efficiency at 100% Load	70	80	90	%
Temperature Coefficient			0.02	%/°C
0.5W Ripple and Noise		50	75	mVp-p
1W Ripple and Noise		85	150	
Switching Frequency	80	100	150	kHz

All specifications at TA=25°C, 75% of the humidity, Nominal input voltage, full output load unless otherwise specified.

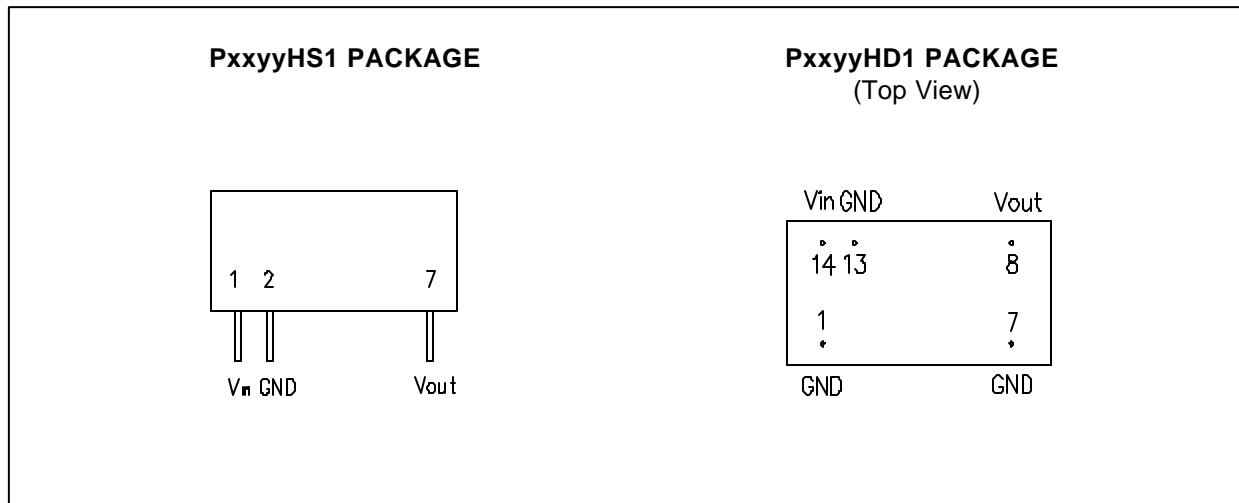
1. Soldering for 10 seconds at 1.5mm away from the edge.

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**P-1W Single Output Series Part Number List**

Input	Output	Power	SIP-0.5W	DIP-0.5W	SIP-1W	DIP-1W
1.5Vdc	3.3Vdc/303mA 3.3Vdc/156mA 5Vdc/200mA 5Vdc/100mA 12Vdc/83mA 12Vdc/47mA	1W 0.5W	P0103HS05	P0103HD05	P0103HS1	P0103HD1
			P0105HS05	P0105HD05	P0105HS1	P0105HD1
3.3Vdc			P0305HS05	P0305HD05	P0305HS1	P0305HD1
			P0312HS05	P0312HD05	P0312HS1	P0312HD1
5Vdc			P0503HS05	P0503HD05	P0503HS1	P0503HD1
			P0505HS05	P0505HD05	P0505HS1	P0505HD1
			P0512HS05	P0512HD05	P0512HS1	P0512HD1
6Vdc			P0603HS05	P0603HD05	P0603HS1	P0603HD1
			P0605HS05	P0605HD05	P0605HS1	P0605HD1
			P0612HS05	P0612HD05	P0612HS1	P0612HD1
9Vdc			P0903HS05	P0903HD05	P0903HS1	P0903HD1
			P0905HS05	P0905HD05	P0905HS1	P0905HD1
	P0912HS05	P0912HD05	P0912HS1	P0912HD1		
12Vdc	P1203HS05	P1203HD05	P1203HS1	P1203HD1		
	P1205HS05	P1205HD05	P1205HS1	P1205HD1		
	P1212HS05	P1212HD05	P1212HS1	P1212HD1		

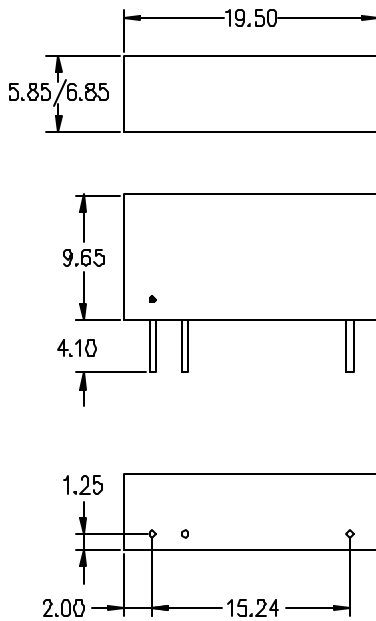
**PIN CONFIGURATION**



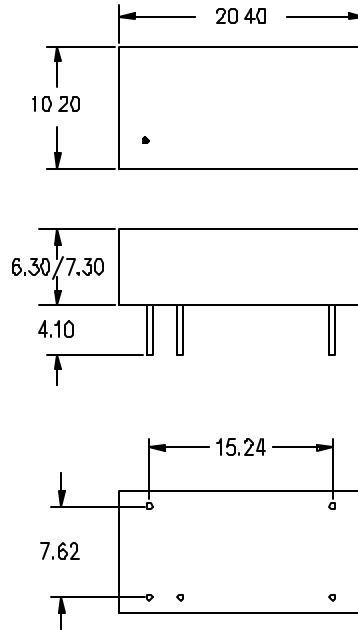
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**Mechanical Dimension: in mm**

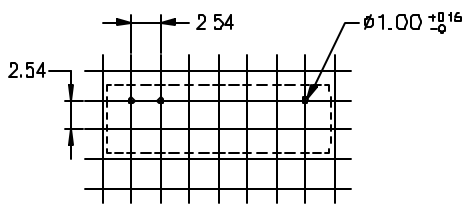
**PxyyHS1 PACKAGE DIMENTIONS**



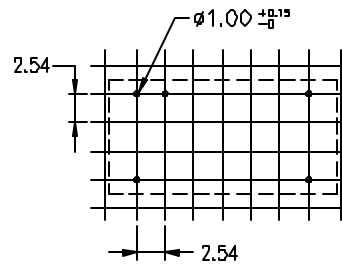
**PxyyHD1 PACKAGE DIMENTIONS**



**DIMENSIONAL RECOMMENDATIONS FOR PCB LAYOUT**



**SIP PACKAGE DIMENSIONS**



**DIP PACKAGE DIMENSIONS**