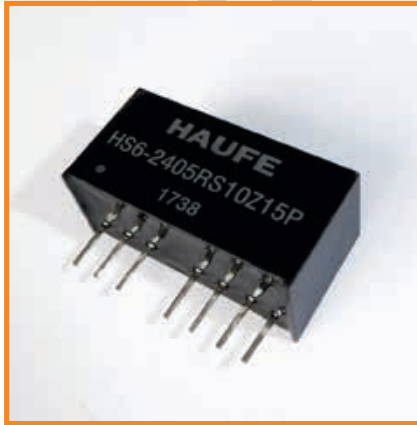




HS6-XXYYRS10Z15/Z30P series are a range of isolated 1 Watt converters in a SIP8 package, 2:1 wide input range and tightly regulated output voltage qualifies these converters for many cost critical applications in industrial and consumer electronics. Operating temperature ranges from -40 °C to +85°C the internal SMD construction makes it possible to offer a product with high performance at low cost.



**FEATURES:**

- RoHS compliant
- Operating temperature: -40°C to +85°C
- Efficiency up to 83%
- Output voltage: 3.3V, 5V, 9V, 12V, 15V, 24V
- 2:1 wide range voltage input
- Low regulation
- Power density 0.91W/cm<sup>2</sup>
- Low ripple noise
- Continuous short circuit protection
- 1.5KVDC isolation, 3 KVDC optional
- Input voltage: 5V, 12V, 24V, 48V
- External control (CTRL)
- Optional: Continuous short circuit protection

H-Model	Input Voltage (VDC) Nominal	Input Voltage (VDC) Range	Input Voltage (VDC) Max*	Output Voltage (VDC)	Output Current (mA) Max.	Output Current(mA) Min.	Efficiency (%Typ.)
HS6-1203RS10Z15/30P	12 (2:1)	9.0-18	22	3.3	303	30	74
HS6-2403RS10Z15/30P	24 (2:1)	18-36	40	3.3	303	30	72
HS6-0505RS10Z15/30P	5 (2:1)	4.5-9.0	11	5	200	20	70
HS6-1205RS10Z15/30P	12 (2:1)	9.0-18	22	5	200	20	76
HS6-2405RS10Z15/30P	24 (2:1)	18-36	40	5	200	20	76
HS6-4805RS10Z15/30P	48 (2:1)	36-72	80	5	200	20	76
HS6-0509RS10Z15/30P	5 (2:1)	4.5-9.0	11	9	111	11	71
HS6-1209RS10Z15/30P	12 (2:1)	9.0-18	22	9	111	11	78
HS6-2409RS10Z15/30P	24 (2:1)	18-36	40	9	111	11	78
HS6-4809RS10Z15/30P	48 (2:1)	36-72	80	9	111	11	78
HS6-0512RS10Z15/30P	5 (2:1)	4.5-9.0	11	12	83	8	76
HS6-1212RS10Z15/30P	12 (2:1)	9.0-18	22	12	83	8	79
HS6-2412RS10Z15/30P	24 (2:1)	18-36	40	12	83	8	80
HS6-4812RS10Z15/30P	48 (2:1)	36-72	80	12	83	8	80
HS6-0515RS10Z15/30P	5 (2:1)	4.5-9.0	11	15	67	7	75
HS6-1215RS10Z15/30P	12 (2:1)	9.0-18	22	15	67	7	80
HS6-2415RS10Z15/30P	24 (2:1)	18-36	40	15	67	7	80
HS6-4815RS10Z15/30P	48 (2:1)	36-72	80	15	67	7	80
HS6-0524RS10Z15/30P	5 (2:1)	4.5-9.0	11	24	42	4	72
HS6-1224RS10Z15/30P	12 (2:1)	9.0-18	22	24	42	4	72
HS6-2424RS10Z15/30P	24 (2:1)	18-36	40	24	42	4	77

Package Unit: 15

The models listed above is just for standard type. If you need the special specification product, please contact our specialists: [sales@haufe-power.de](mailto:sales@haufe-power.de)

HS6-0505RS10Z "15/30" P = 1.5KVDC or 3.0KVDC

The information and specifications contained in this data sheet are believed to be correct at time of publication. However, HAUFE GmbH & Co. KG accepts no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice. No rights under any patent accompany the sale of any such product(s) or information contained herein.



**ISOLATION CHARACTERISTICS:**

Isolation test voltage (VDC):	1500 / 3000 (tested for 1 minute and 1mA max.)
Isolation resistance (Test at 500 VDC) (GΩ):	1 / - / -
Isolation capacitance (Input/Output, 100kHz/1V) (pF):	- / 35 / -

**ABSOLUTE MAXIMUM RATINGS:**

Short-circuit protection:	continuous, automatic recovery
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**OUTPUT CHARACTERISTICS (Min. / Typ. / Max.):**

Output power (W): (Refer to product program)	0.1 / - / 1
Output voltage accuracy (Refer to recommended circuit) (%):	- / ±1 / ±3
Temperature drift (Vout) (%/°C):	- / - / ±0.03
Ripple & Noise (mVp-p):	- / 25 / 75 (20MHz Bandwidth)
Line regulation (input voltage from low to high) (%):	- / ±0.2 / ±0.5
Load regulation 10% to 100% load (%):	- / ±0.5 / ±1.0
All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.	

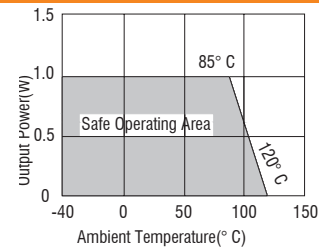
**GENERAL CHARACTERISTICS (Min. / Typ. / Max.):**

MTBF (K hours):	1000 / - / -
Weight (g):	5
Case material:	Plastic (UL94-V0)

**TEMPERATUR CHARACTERISTICS (Min. / Typ. / Max.):**

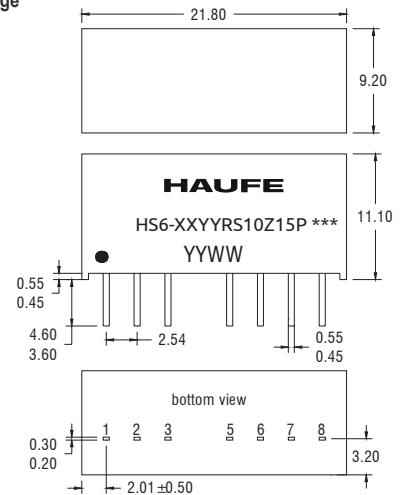
Storage humidity, test condition (%):	- / - / 95
Operating temperature (°C):	-40 / - / +85
Storage temperature (°C):	-50 / - / +125
Lead temperature (°C):	- / - / 300 (1.5mm from case for 10 seconds)
No-load power consumption (mW):	120 / - / -
Cooling:	Free air convection

**TEMPERATURE DERATING GRAPHS**



**MECHANICAL DIMENSION**

**SIP Package**



Weight: 5.0g

All dimensions in mm±0.25mm. All pins on a 2.54mm pitch and within±0.25mm of true position.

\*\*\* 3.0 KVDC = HS6-XXYYRS10Z30P

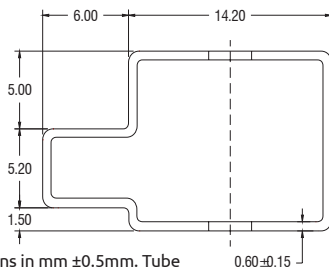
**PIN CONNECTIONS (8 PIN SIP) SOLDERING INFORMATION**

Pin	Single Output
1	GND
2	Vin
3	CTRL
5*	NC
6	+V0
7	0V
8	CS

This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. These series are backward compatible with Sn/Pb soldering systems.

\* THIS PIN MUST HAVE NO EXTERNAL CONNECTION

**TUBE OUTLINE DIMENSIONS**

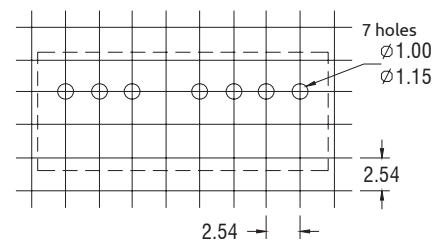


All dimensions in mm ±0.5mm. Tube length 520mm ±2mm.

**APPLICATION NOTES**

External capacitance: These converters will work without external capacitors, in order to guarantee the full parametric performance over the full line and load range we recommended you to use the value we listed at right side. All parts have been tested and characterized using the following values and test circuit.

**RECOMMENDED FOOTPRINT DETAILS**



Unless otherwise stated, all dimensions in mm ±0.5mm

**External Capacitor Table**

Single Vout (VDC)	Cout (uF)
3.3	1000
5	680
9	560
12	470
15	330
24	220

**RECOMMENDED CIRCUIT**

