



The HD1-XXYYS05Z15/P series are miniature, isolated low power and high efficiency DC/DC converters in a DIP package. They offer the ideal solution in many space critical applications for board level power distribution. The internal SMD construction makes it possible to offer a product with high performance at low cost. The series offers smaller size, improved efficiency, lower output ripple noise and 1.5KVDC isolation. Operating temperature -40 °C to +105 °C.



### FEATURES:

- RoHS compliant
- Single output rail
- 1.5KVDC isolation
- High efficiency for low power applications
- DIP package styles
- Power density 0.36W/cm<sup>3</sup>
- UL 94V-0 package material
- Footprint from 0.69cm<sup>2</sup>
- Input voltage: 3.3V, 5V, 12V
- Output voltage: 3.3V, 5V, 9V, 12V, 15V
- Custom solutions available)
- Operating temperature: -40°C to 105°C
- Optional: Continuous short circuit protection

H-Model	Nominal Input Voltage (V)	Output Voltage (V)	Output Current (Max./Min) (mA)	Efficiency (%)	Package Style
HD1-0303S05Z15	3,3	3,3	152/15.2	76	DIP8
HD1-0305S05Z15	3,3	5	100/10	76	DIP8
HD1-0503S05Z15	5	3,3	152/15.2	76	DIP8
HD1-0505S05Z15	5	5	100/10	76	DIP8
HD1-0509S05Z15	5	9	55.5/5.55	77	DIP8
HD1-0512S05Z15	5	12	41.7/4.17	78	DIP8
HD1-0515S05Z15	5	15	33.3/3.33	78	DIP8
HD1-1205S05Z15	12	5	100/10	76	DIP8
HD1-1209S05Z15	12	9	55.5/5.55	77	DIP8
HD1-1212S05Z15	12	12	41.7/4.17	78	DIP8
HD1-1215S05Z15	12	15	33.3/3.33	78	DIP8

Package Unit: 35

Add suffix "P" for continuous short circuit protection e.g. „HD1-0305S05Z15P“.

The models listed above is just for standard type. If you need the special specification product, please contact our service member by telephone presented in shortform cover or e-mail to : sales@haufe-power.de

### INPUT CHARACTERISTICS (Min./Typ./Max.):

Voltage range 3.3V input types (V): 2.9 / 3.3 / 3.6

Voltage range 5V input types (V): 4.5 / 5.0 / 5.5

Voltage range 12V input types (V) : 11 / 12 / 13.3

### ISOLATION CHARACTERISTICS:

Isolation test voltage (VDC): 1500 / - / - (Tested for 1 second)

Resistance (Viso = 1000 VDC) (GΩ): 1 / - / -

### ABSOLUTE MAXIMUM RATINGS:

Short-circuit protection: 1 second

Lead temperature 1.5mm from case for 10 seconds: 300°C

Input voltage Vin: 5.5V / 7V / 15V (3.3V / 5V / 12V)

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### OUTPUT CHARACTERISTICS (Min. / Typ. / Max.):

Rated Power TA= -40°C to 85°C (W):	- / - / 0.5
Voltage Set Point Accuracy (%):	(See tolerance envelope)
Line regulation High VIN to low VIN (%):	- / - / 1.2
Load Regulation (***) 5V output types (%):	- / - / 16
Load Regulation (***) All other types (output) (%):	- / - / 11

### Output Characteristics Notes:

All specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

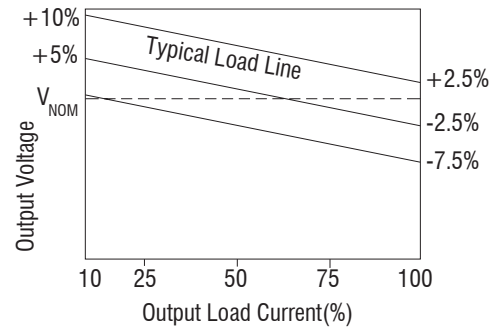
### GENERAL CHARACTERISTICS (Min. / Typ. / Max.)

Switching frequency (all input types) (kHz):	- / 110 / -
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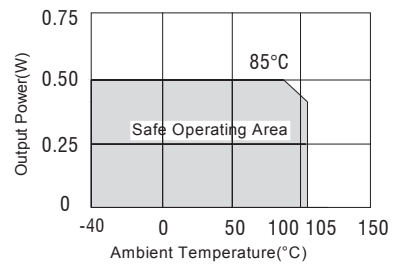
### TEMPERATUR CHARACTERISTICS (Min. / Typ. / Max.)

Derating if the temperature is ≥85°C (°C):	-40 / - / 105
Storage temperature (°C):	-55 / - / 130
Cooling:	Free air convection

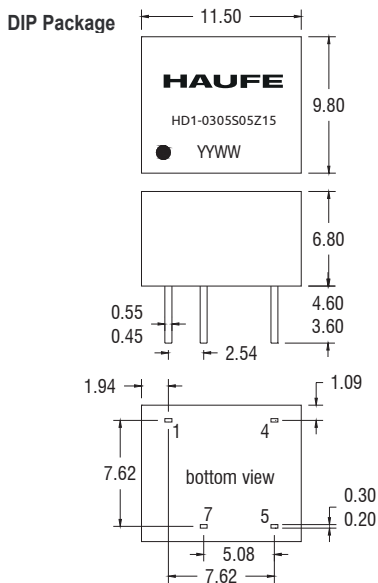
### TOLERANCE ENVELOPES



### TEMPERATURE DERATING GRAPHS



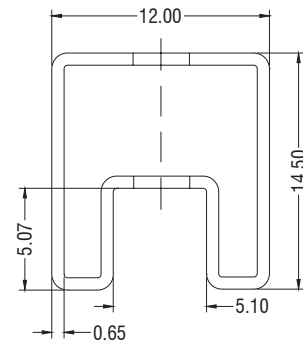
### MECHANICAL DIMENSION



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

### TUBE OUTLINE DIMENSIONS

8Pin DIP Tube



Unless otherwise stated all dimensions in mm±0.5mm.  
 Tube length (8 Pin DIP) : 520mm ±2mm.  
 Tube length (4 Pin SIP) : 520mm ±2mm.

### PIN CONNECTIONS

8 PIN DIP	
Pin	Function
1	-Vin
4	+Vin
5	+Vout
7	-Vout

### RECOMMENDED FOOTPRINT DETAILS

8Pin DIP Package

