



Miniature surface mounted DC/DC Converters are an ideal and economical solution for many applications where noise reduction, voltage isolation, voltage conversion in distributed power systems is required. these converters are qualified for the higher temperatures requested by lead-free reflow solder processes, especially for automated SMD production lines.



FEATURES:

- RoHS compliant
- Efficiency up to 80%
- Single isolated output
- 3KVDC isolation
- Custom solutions available
- UL 94V-0 package material
- Operating temperature: -40 to +105 °C
- Input voltage: 3.3V, 5V, 12V, 15V, 24V
- Output voltage: 3.3V, 5V, 9V, 12V, 15V
- Optional: Continuous short circuit protection

HM1-XXYY505Z30/X/P	Nominal Input Voltage (V)	Output Voltage (V)	Output Current (Max./Min) (mA)	Efficiency (%)
HM1-0303S05Z30	3.3	3.3	152/15.2	72
HM1-0305S05Z30	3.3	5	100/10	77
HM1-0309S05Z30	3.3	9	55.5/5.55	77
HM1-0312S05Z30	3.3	12	41.6/4.16	77
HM1-0315S05Z30	3.3	15	33.3/3.33	80
HM1-0503S05Z30	5	3.3	152/15.2	74
HM1-0505S05Z30	5	5	100/10	69
HM1-0509S05Z30	5	9	55.5/5.55	75
HM1-0512S05Z30	5	12	41.6/4.16	78
HM1-0515S05Z30	5	15	33.3/3.3	78
HM1-1203S05Z30	12	3.3	152	74
HM1-1205S05Z30	12	5	100	67
HM1-1209S05Z30	12	9	55.5	73
HM1-1212S05Z30	12	12	41.6/4.16	74
HM1-1215S05Z30	12	15	33.3/3.33	75
HM1-1505S05Z30	15	5	100	77
HM1-1515S05Z30	15	15	33.3	75
HM1-2403S05Z30	24	3.3	152	74
HM1-2405S05Z30	24	5	100	67
HM1-2409S05Z30	24	9	55.5	73
HM1-2412S05Z30	24	12	41.7	74
HM1-2415S05Z30	24	15	33.3	75

Package Unit: -

Optional: suffix "X" = has no Pin 5, 10, 12 e.g.: HM1-1212S05Z30X
 Optional: suffix "P" = continuous short circuit protection, e.g.: HM1-1212S05Z30XP

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

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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 / 5.5
Voltage range 12V input types (V) :	11 / 12 / 13.3
Voltage range 15V input types (V):	13.4 / 15 / 16.4
Voltage range 24V input types (V):	22 / 24 / 26.6

ISOLATION CHARACTERISTICS:

Isolation test voltage (VDC):	3000 / - / - (Tested for 1 second)
Resistance (Viso = 1000 VDC) (GΩ):	1 / - / -

ABSOLUTE MAXIMUM RATINGS:

Short-circuit protection:	1 sec.
Lead temperature 1.5mm from case for 10 seconds:	300°C
Internal power dissipation :	610mW
Input voltage Vin:	03= 5.5V / 05=7V / 12=15V / 15=18V / 24=28V

Comment on AMS:

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

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

Rated Power TA= -40°C to 85°C:	- / - / 0.5
Voltage Set Point Accuracy (%):	See tolerance envelope
Line regulation High VIN to low VIN (%):	/ 1.0 / 1.2
Load regulation:	
03XX, 0503, 1203, 2403	- / 10 / 14
0505, 1205, 2405	- / 13 / 15
0509, 1209, 2409	- / 8.0 / 9.0
0512, 1212, 2412	- / 6.5 / 7.5
0515, 1215, 1515, 2415	- / 6 / 7.0

(*** = 10% load to rated load)

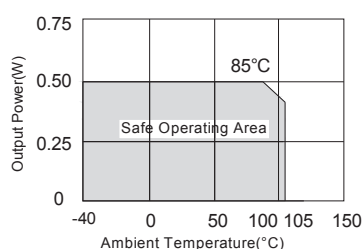
GENERAL CHARACTERISTICS (Min. / Typ. / Max.)

Switching frequency (all output types) (kHz):	- / 120 / -
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TEMPERATUR CHARACTERISTICS (Min. / Typ. / Max.)

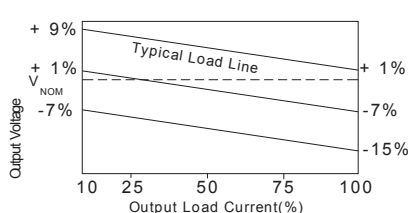
Derating if the temperature is ≥85°C (°C):	-40 / - / 105
Storage temperature (°C):	-55 / - / 125
Cooling:	Free air convection

TEMPERATURE DERATING GRAPHS

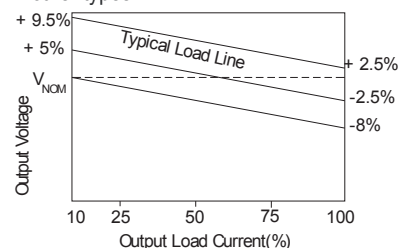


TOLERANCE ENVELOPES

3.3V output types

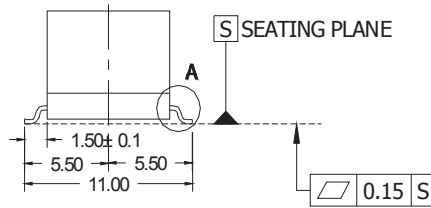
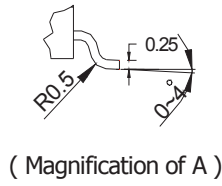
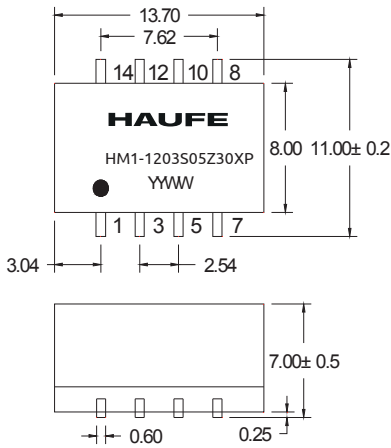


All other types





MECHANICAL DIMENSION



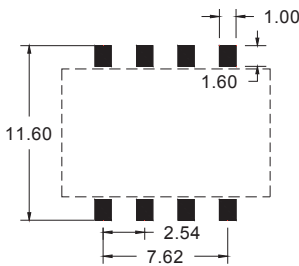
All dimensions in mm ± 0.25mm. All pins on a 2.54mm pitch and within ± 0.25mm of true position.
Weight: 1.21g

PIN CONNECTIONS

8 PIN SMD		
Pin	Function	Add suffix "X" function
1	-Vin	-Vin
3	+Vin	+Vin
5	NA	No Pin
7	-Vout	-Vout
8	+Vout	+Vout
10	NA	No Pin
12	NA	No Pin
14	NA	NA

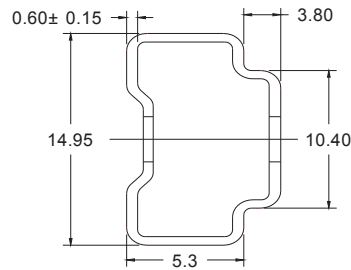
NA - Not available for electrical connection.

RECOMMENDED FOOTPRINT DETAILS



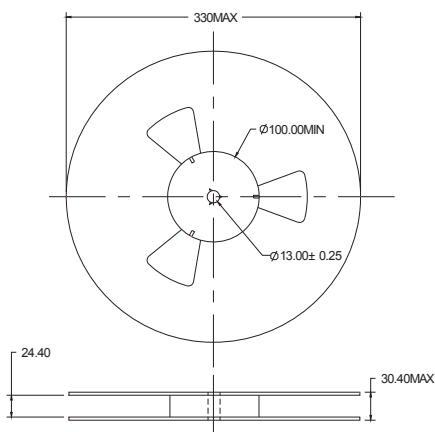
All pins on a 2.54mm pitch.
Unless otherwise stated all dimensions in mm ± 0.5mm.

TUBE OUTLINE DIMENSIONS

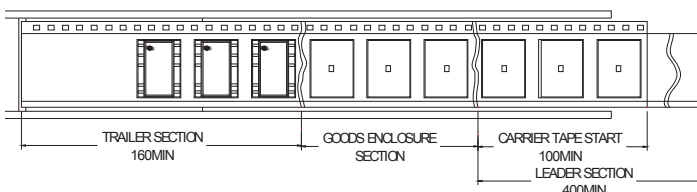


Unless otherwise stated all dimensions in mm ± 0.5mm.
Tube length: 475mm ± 2.0mm Tube Quantity: 35PCS

REEL OUTLINE DIMENSIONS



REEL PACKING DETAILS



Product Orientation Pin 1 located nearest to carrier drive sprocket. REEL Quantity: 500pcs

TAPE OUTLINE DIMENSIONS

