



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 re-flow solder processes, especially for automated SMD production lines.



FEATURES:

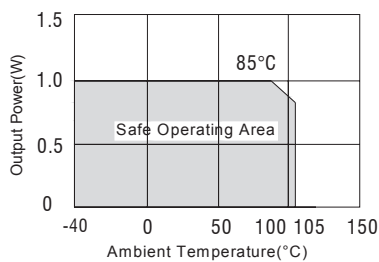
- RoHS compliant
- Efficiency up to 80%
- Operating temperature: -40 to +105°C
- Power density 1.36W/cm³
- Input voltage: 3.3V, 5V, 12V, 15V, 24V
- Output voltage: 3.3V, 5V, 9V, 12V, 15V
- UL 94V-0 package material
- 3KVDC isolation
- Custom solutions available
- Optional: Continuous short circuit protection

HM3-XXYYZ10Z30/X/P	Nominal Input Voltage (V)	Output Voltage (V)	Output Current (Max./Min) (mA)	Efficiency (%)
HM3-0303S10Z30	3,3	3,3	303/30.3	70
HM3-0305S10Z30	3,3	5	201/20.1	70
HM3-0309S10Z30	3,3	9	111/11.1	72
HM3-0312S10Z30	3,3	12	83/8.3	75
HM3-0315S10Z30	3,3	15	67/6.7	80
HM3-0503S10Z30	5	3,3	303/30.3	70
HM3-0505S10Z30	5	5	201/20.1	70
HM3-0509S10Z30	5	9	111/11.1	72
HM3-0512S10Z30	5	12	83/8.3	75
HM3-0515S10Z30	5	15	67/6.7	80
HM3-1203S10Z30	12	3,3	303/30.3	70
HM3-1205S10Z30	12	5	201/20.1	70
HM3-1209S10Z30	12	9	111/11.1	66
HM3-1212S10Z30	12	12	83/8.3	75
HM3-1215S10Z30	12	15	67/6.7	80
HM3-1515S10Z30	15	15	67/6.7	80
HM3-2403S10Z30	24	3,3	303/30.3	70
HM3-2405S10Z30	24	5	201/20.1	70
HM3-2409S10Z30	24	9	111/11.1	72
HM3-2412S10Z30	24	12	83/8.3	75
HM3-2415S10Z30	24	15	67/6.7	80

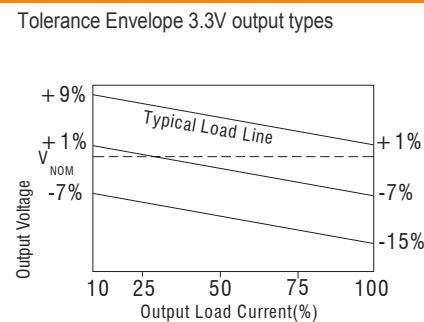
Optional: suffix "X" = has no Pin 5, 10, 12 e.g.: HM3-1212S10Z30X
 Optional: suffix "P" = continuous short circuit protection, e.g.: HM3-1212S10Z30XP

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

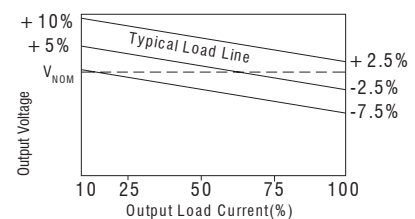
TEMPERATURE DERATING GRAPHS



TOLERANCE ENVELOPES



All other types



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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
Reflected ripple current (mA p-p):	- / 40 / 50

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 :	680mW
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:	- / - / 1.0
Voltage Set Point Accuracy (%):	See tolerance envelope
Line regulation High VIN to low VIN (%):	/ 1.0 / 1.2
6Load regulation:	
Load Regulation *** 0303, 0503	- / 9 / -
Load Regulation *** 0309	- / 9 / -
Load Regulation *** 0509, 1209, 2409	- / 7 / -
Load Regulation *** 0312, 0315	- / 12 / -
Load Regulation *** 0512, 1212, 2412	- / 7 / -
Load Regulation *** 0515, 1215, 1515, 2415	- / 7 / -
Load Regulation *** 5V output types (%):	- / 9 / -
<i>(*** = 10% load to rated load)</i>	

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

Switching frequency 0312, 0315 (kHz)	- / 110 / -
Switching frequency 0303, 0305, 0503 (kHz)	- / 115 / -
Switching frequency all other variants (kHz)	- / 120 / -

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

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

BLECHBEARBEITUNG
 MAGNETISCHE ABSCHIRMUNGEN
 INDUKTIVITÄTEN
 STROMVERSORGUNGEN

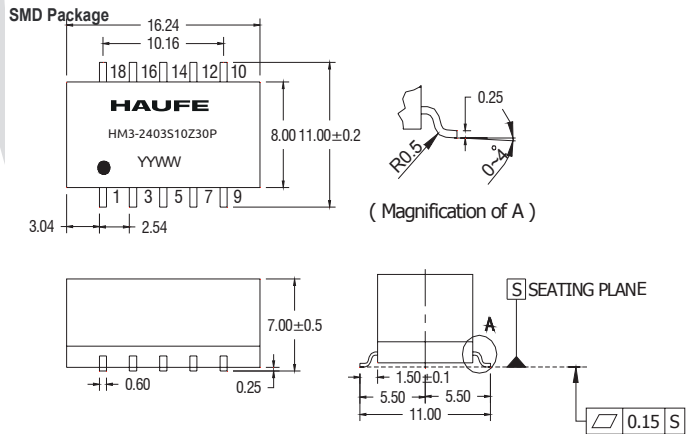


PIN CONNECTIONS

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

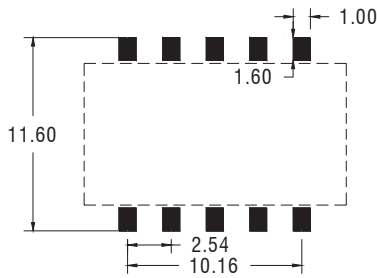
NA - Not available for electrical connection.

MECHANICAL DIMENSION

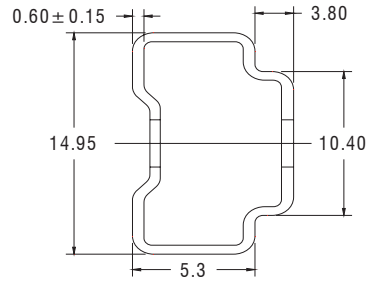


All dimensions in mm ±0.25mm. All pins on a 2.54 pitch. Weight: 1.53g

RECOMMENDED FOOTPRINT DETAILS

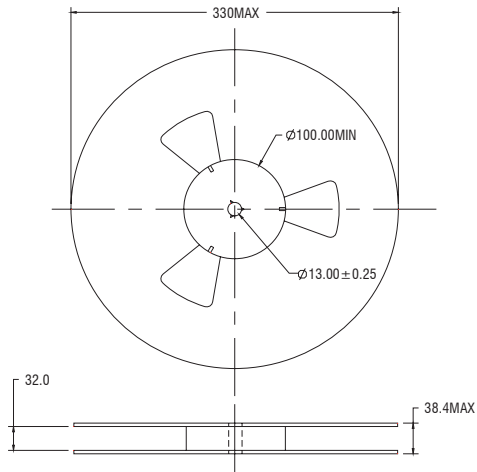


TUBE OUTLINE DIMENSIONS

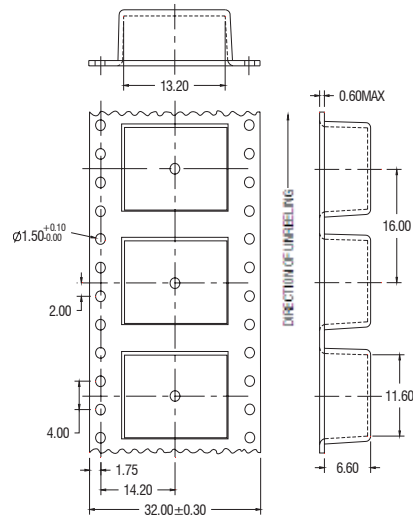


Unless otherwise stated all dimensions in mm±0.5mm.
Tube length: 475mm±2.0mm Tube Quantity: 25PCS

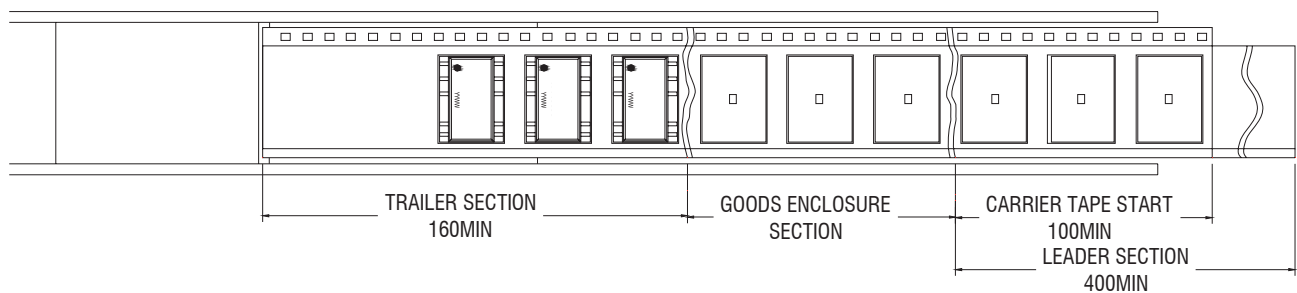
REEL OUTLINE DIMENSIONS



TAPE OUTLINE DIMENSIONS



REEL PACKING DETAILS



Product Orientation

Pin 1, located nearest to carrier drive sprocket

Reel quantity : 500 PCS