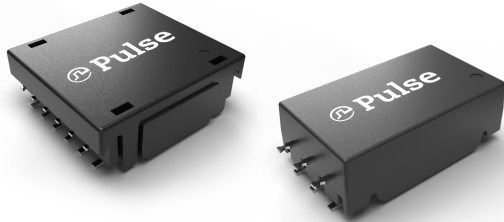


Next Generation approved BMS Transformers

HM2146NL, HM21466/67/68/69NL for NXP, ADI, TI or Infineon x-channel multi-cell battery monitor IC



- ☞ Fully qualified with leading BMS Silicon
- ☞ Transformer only design provides for flexible PCB layout
- ☞ Construction meets IEC 61558 and IEC/UL62368-1
- ☞ High temperature performance up to +125°C
- ☞ Automated Winding and Production Process
- ☞ AEC-Q200 qualified, RoHS and REACH Compliant

Applications:

Ideal for Electric Vehicles (EV), Energy Storage (ESS) and marine or aviation transportation.

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

Part Number	Inductance (100kHz, 100mVrms)	Number of Channels	Choke fitted	Isolation breakdown (Pri:Sec)	Working Voltage	Insulation & Creepage (mm)	Winding Style	Qualified BMS Silicon
HM2162NL	150 uH min	Dual	YES	4300Vdc / 60sec	1600VDC	Functional	1CT : 1CT	NXP, ADI, Infineon, Texas
HM2166NL	150 uH min	Single	NO	4300Vdc / 60sec	1000VDC	Basic (>10)	1 : 1	NXP, ADI, Infineon, Texas
HM2167HL	150 uH min	Single	NO	3700Vrms / 60sec	1000VDC	Basic (>10)	1CT : 1CT	NXP, ADI, Infineon, Texas
HM2168NL	150 uH min	Dual	NO	4300Vdc / 60sec	1500VDC	Functional	1CT : 1CT	NXP, ADI, Infineon, Texas
HM2169NL	150 uH min	Single	YES	4300Vdc / 60sec	1000VDC	Basic (>10)	1CT : 1CT	NXP, ADI, Infineon, Texas

Additional Electrical performance

Electrical Specifications @ 25°C - Operating Temperature -40°C to +125°C

Part Number	Leakage Inductance (Max)	Winding DCR (Ω)		Insertion Loss	Return Loss		CMR (dB min)		Insulation Resistance (MOhms)
		PHY Side	Line Side		Z out = 100 Ω	1-10MHz	10-1000MHz		
HM2162NL	0.50 uH @ 100kHz	0.45 max	0.85 max	-0.25dB max @ 4MHz	-20 dB min @ 4MHz	35 min	20 min	400 MIN	
HM2166NL	0.50 uH @ 100kHz	0.45 max	0.45 max	-0.50dB max @ 4MHz	-20 dB min @ 4MHz	-	-	-	
HM2167HL	0.50 uH @ 100kHz	0.45 max	0.45 max	-0.50dB max @ 4MHz	-20 dB min @ 4MHz	-	-	-	
HM2168NL	0.50 uH @ 100kHz	0.45 max	0.45 max	-0.25dB max @ 4MHz	-20 dB min @ 4MHz	-	-	-	
HM2169NL	0.50 uH @ 100kHz	0.45 max	0.85 max	-0.50dB max @ 4MHz	-20 dB min @ 4MHz	35 min	20 min	400 MIN	

Notes:

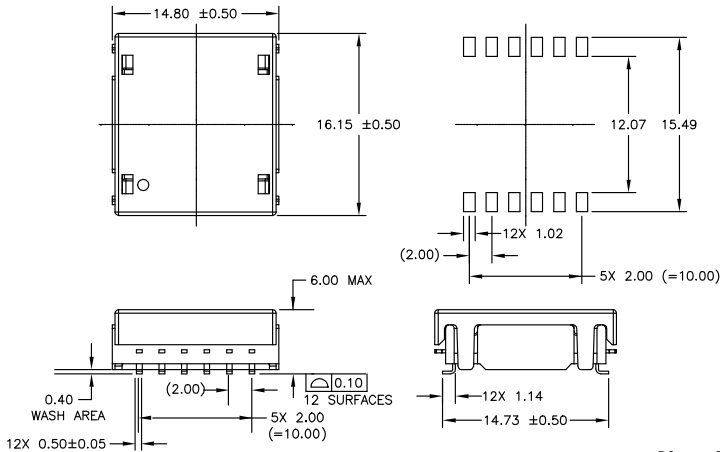
1. Storage Temperature: -50°C to +125°C
2. Compliance to J-STD:
 - A. J-STD-002: Solderability at 245°C Reflow Profile
 - B. J-STD-020: Moisture Sensitive Level 1
 - C. J-STD-075: R7, 245°C Maximum Through Reflow Solder
3. The NL suffix part comes in Tubes with 35pcs per tube. To order tape and reel packaging add a "T" suffix to the part number (ie: HM2168NL becomes HM2168NLT). Quantity per reel is 350pcs and 500pcs /reel.
4. Header: DAP (Diallyl Phthalate) with flammability Rating UL 94V-0 or better
5. Lead Frame: Cooper Alloy
Under plated: Half Hard Ductile Nickel 50-100" (1.3-2.5um)
Over plated : 100% Tin electro-deposited per ASTM B545 300 - 50u" (8-13um)
Finish : Matte finish 100% Tin solder
6. AEC-Q200 Qualified, PPAP on request

Next Generation approved BMS Transformers

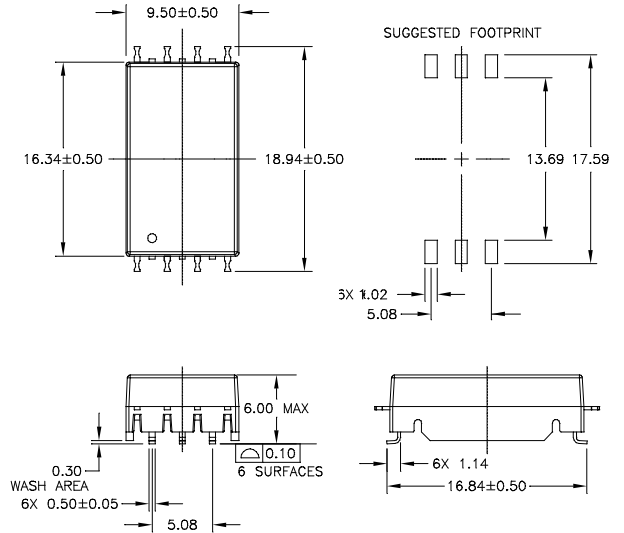
HM2146NL, HM21466/67/68/69NL for NXP, ADI, TI or Infineon x-channel multi-cell battery monitor IC

MECHANICAL

HM2162/68NL



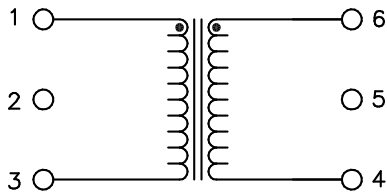
HM2166/67/69NL



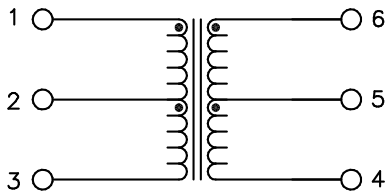
Dimensions in mm
Unless otherwise specified,
all tolerances are 3 0,25

SCHEMATIC

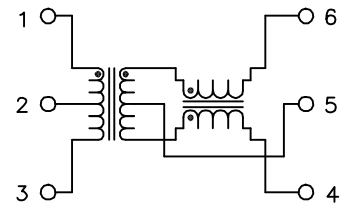
HM2162NL



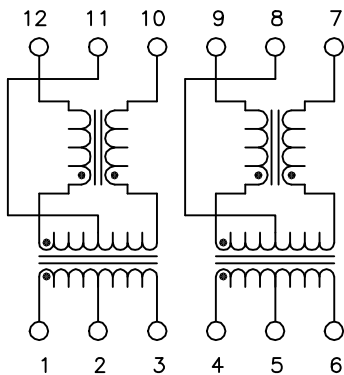
HM2167HL



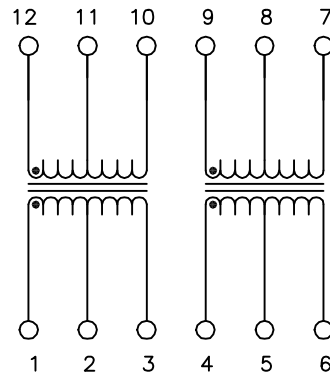
HM2169NL



HM2162NL



HM2168NL

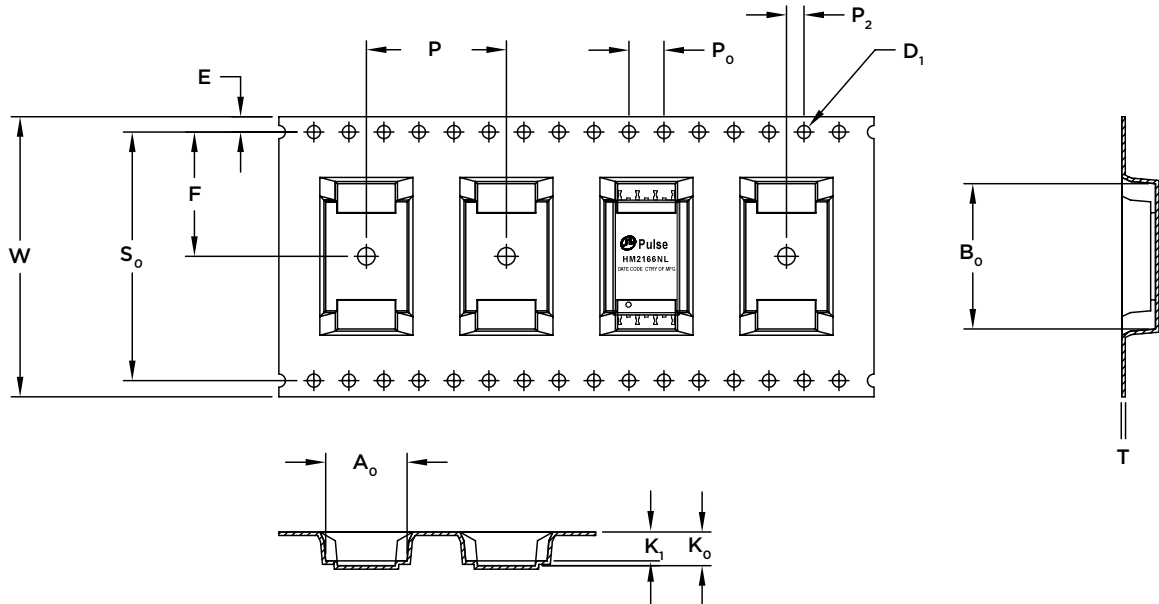


Next Generation approved BMS Transformers

HM2146NL, HM21466/67/68/69NL for NXP, ADI, TI or Infineon x-channel multi-cell battery monitor IC

TAPE & REEL

HM2162/66/68/69NL, HM2167HL

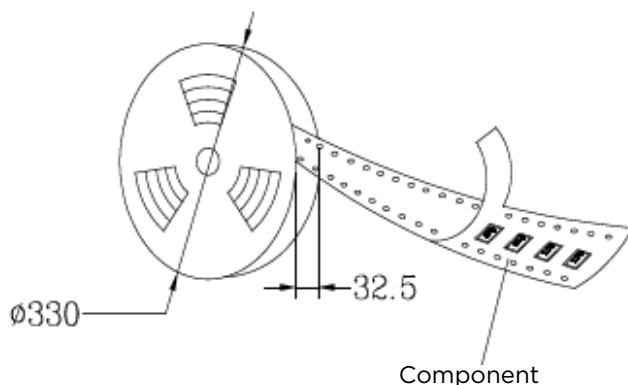


HM2166/69NL, HM2167HL

W	32.0±0.30	P	16.00	A ₀	9.90	B ₀	16.60
S ₀	28.40	P ₀	4.00	A ₁	-----	B ₁	-----
E	1.75	P ₂	2.00	A ₂	-----	B ₂	-----
F	14.20	D ₀	-----	K ₀	6.60	K ₁	5.80
T	0.50±0.05	D ₁	1.50 ^{+0.10} _{-0.00}	QUANTITY PER REEL		500 pcs	

HM2162NL, HM2168NL

W	24.0±0.30	P	24.00	A ₀	16.10	B ₀	15.10
S ₀	28.40	P ₀	4.00	A ₁	-----	B ₁	-----
E	1.75	P ₂	2.00	A ₂	-----	B ₂	-----
F	14.20	D ₀	-----	K ₀	7.00	K ₁	5.60
T	0.50±0.05	D ₁	1.50 ^{+0.10} _{-0.00}	QUANTITY PER REEL		350 pcs	



1. **Material:** Black Conductive Polystyrene
2. **Components per Reel:** see table
3. **Quantity per carton:**
 5reels x 350 = 1750 pcs
 6reels x 500 = 2500 pcs

All Dimensions meet EIA-481-D requirements.

For More Information:

Americas - prodinfo_network_americas@yageo.com | Europe - prodinfo_network_emea@yageo.com | Asia - prodinfo_network_asia@yageo.com

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