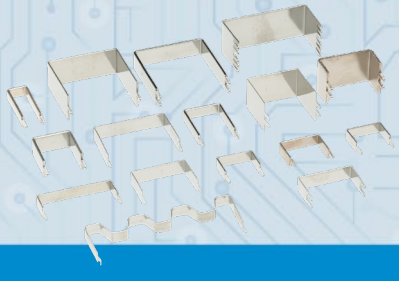


VITROHM
a YAGEO company

LPS Series Datasheet

Power Shunt Resistors | Radial Version
Current Sensor | Open Frame

ORDERING CODE - Example

New SAP Part Nr.:

LPS	250	J	V	-	RP-	R01	AA
Serie	Power rating	Tol.	Pack-Code	TCR	Forming type	* R Value	Special
		J = ±5%	**V** = Vacuum	- Base on spec.	**RP-** = Radial 1 Pin (10[mm] RM) **RL-** = Radial 1 Pin (15[mm] RM) **RH-** = Radial 2 Pin (15[mm] RM) **CM-** = Custom made		**AA** = Standard

*1 mΩ to 68 mΩ there are 4~5 digits indicated the resistance value. Letter R/L is decimal point
(R001 =R001, R0022 =2L2 , R0068 = 6L8)

Historical VTM Part Nr.:

LPS355 – 0	5	B	0R01
Type	Tol.	Pack-Code	R Value

LPS356 – 0	5	B	0R01
Type	Tol.	Pack-Code	R Value

LPS357 – 1	5	B	0R01
Type	Tol.	Pack-Code	R Value

APPLICATIONS

- Automotive
- Industrial
- Power & Energy

FEATURES

- Very low inductance
- Open frame design
- Solderable terminals
- Customized design available
- RoHs & REACH Compliant

ELECTRICAL SPECIFICATIONS

Type / Forming type		**LPS - RP**	**LPS - RL**	**LPS - RH**
Historical Part Number		**LPS355-0**	**LPS356-0**	**LPS357-1**
Style		Existing styles upon request		
Nominal Power Rating P_{70}		Depends on the value, please check the table below		
Resistance Range (Preferred values)	[Ω]	0R005, 0R0068, 0R01, 0R015, 0R022, 0R033, 0R047, 0R051, 0R068 (Other values upon request)		0R001, 0R0022, 0R0033, 0R005 0R0068, 0R01, R015, R022, R033
E-Series (preferred)		E24 (Other upon request)		
Tolerances	±[%]	J = 5% (Others upon request)		
Temperature Coefficient	$\pm[10^{-6*}K^{-1}]$	-80 ...+40 / for CuNi44 (Others upon request)		
Working Temperature Range	[°C]	-55 ... +300		
Thermal Resistance	$[KW^{-1}]$	280°C / P_{70}		
Max. Working Voltage	$[V]_{RMS}$	$\sqrt{P_{70} \times R}$		
Dielectric Withstanding Voltage IEC115-1 clause 4.7 (1[min])	$[V]_{RMS}$	Non insulated		

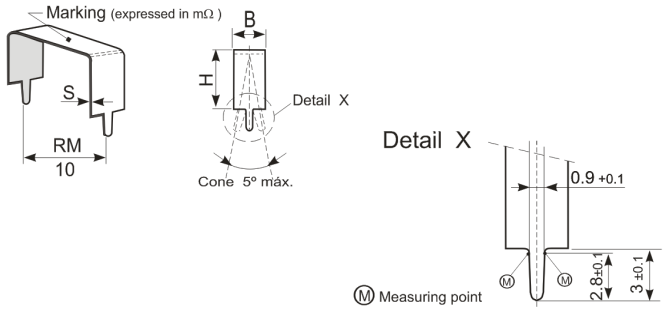
File Nr. 2859.18-450.105.06 | Revision: 202104

LPS Series Datasheet

DIMENSIONS [mm]

Type: LPS-RP

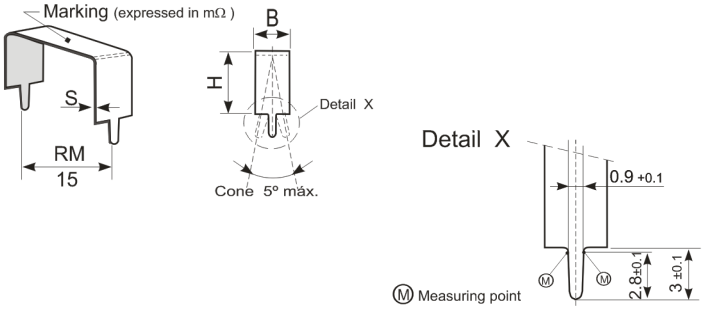
Type	Forming Type [RP]	Historical P/N:
LPS	RP = Radial 1 Pin (10[mm] RM)	LPS355 - 0



R-Value	Resistance values	Material	B	S	H max.	Rated Power [W]
R005	R005	CuNi44	5,0	0,7	13,5	2,2
R0068	6L8		4,0	0,8	17,5	2,1
R01	R01		4,0	0,5	16,0	2,0
R015	R015		4,0	0,3	14,0	1,8
R022	R022		4,0	0,2	14,0	1,8
R033	R033		3,0	0,2	16,0	1,5
R047	R047		2,0	0,2	15,0	1,0
R051	R051		2,0	0,2	16,5	1,0
R068	R068		2,0	0,2	23,0	1,4

Type: LPS-RL

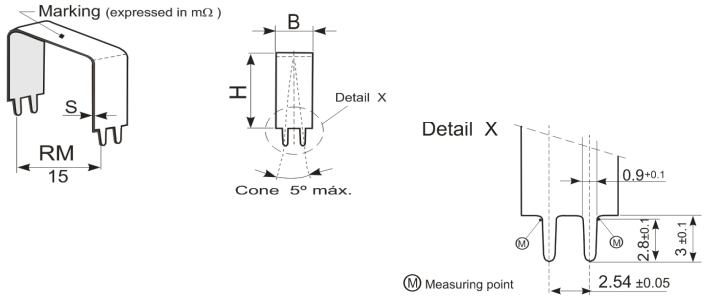
Type	Forming Type [RL]	Historical P/N:
LPS	RL = Radial 1 Pin (15[mm] RM)	LPS356 - 0



R-Value	Resistance values	Material	B	S	H max.	Rated Power [W]
R005	R005	CuNi44	5,0	0,7	11,0	2,2
R0068	6L8		4,0	0,8	15,0	2,1
R01	R01		4,0	0,5	13,5	2,0
R015	R015		4,0	0,3	11,5	1,8
R022	R022		4,0	0,2	11,5	1,8
R033	R033		3,0	0,2	13,5	1,5
R047	R047		2,0	0,2	12,5	1,0
R051	R051		2,0	0,2	14,0	1,0
R068	R068		2,0	0,2	20,5	1,4

Type: LPS-RH

Type	Forming Type [RH]	Historical P/N:
LPS	RH = Radial 2 Pin (15[mm] RM)	LPS357 - 1



R-Value	Resistance values	Material	B	S	H max.	Rated Power [W]
R001	R001	CuNi23Mn	10,0	0,8	11,0	3,7
R0022	2L2		10,0	0,8	23,0	7,0
R0033	3L3	CuNi44	10,0	0,5	13,0	4,6
R005	R005		5,0	0,8	14,0	2,6
R0068	6L8		5,0	0,7	21,0	3,4
R01	R01		9,0	0,2	15,0	4,5
R015	R015		7,0	0,2	16,5	4,0
R022	R022		4,0	0,2	12,5	1,9
R033	R033		4,0	0,2	22,0	2,8

File Nr. 2859.18-450.105.06 | Revision: 202104

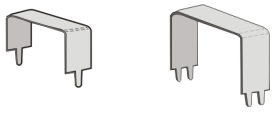
LPS Series Datasheet

PERFORMANCE DATA

Type		LPS - RP	LPS - RL	LPS - RH
Historical Part Number		LPS355-0	LPS356-0	LPS357-1
Derating Linear	[ºC]	70…235 (0W)		
Climatic Category		55/350/56		
Failure Rate *(Total, ϑ_0, max, 60[%] cont. lev.)*	[10^{-9} h^{-1}]	0,1		
Endurance *IEC60115-1 clause 4.25* *(P_{70}, @ 70[°C], 1000[h])*	±[%]	3,0		
Damp Heat, Steady State *IEC60115-1 clause 4.24* *(40[°C], 93[% r.h.], 56[d])*	±[%]	0,5		
Climatic Sequence *IEC60115-1 clause 4.23* *(260^{+5}[°C], 10^{+1}[s])*	±[%]	0,5		
Resistance to Soldering Heat *IEC60115-1 clause 4.18* *(260[°C],10[s])*	±[%]	0,2		
Terminal Strength	±[%]	n. a.		
Terminal Tensile Strength	[N]	n. a.		
Solderability *IEC60068-2-20* *(245^{+5}[ºC] $3^{+0,5}$[s])*		Solder bath method (> 95% coverage) Suitable for wave - soldering		
Marking *IEC60062*		Value imprinted		

PACKAGING

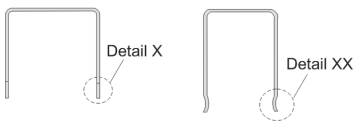
The standard packaging for LPS type is Vacuum, dimensions below.



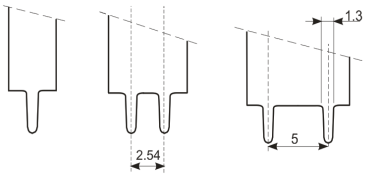
Type	Historical P/N:	Pack Code	Pieces	* Forming Type	Special
LPS - RP	LPS355 – 0	V = Vacuum	1000	RP-	AA = Standard
LPS - RL	LPS356 – 0		1000	RL-	
LPS - RH	LPS357 – 1		500	RH-	

* **RP**- Radial (1 Pin 10[mm] RM) ; **RL**- Radial (1 Pin 15[mm] RM) ; **RH**- Radial (2 Pin 15[mm] RM)

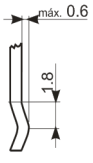
ALTERNATIVE LEAD CONFIGURATIONS



Detail X and XX



Detail XX



File Nr. 2859.18-450.105.06 | Revision: 202104