— K A M AV		
RAMAI		Last update: 2015.12.25 No.RLP-K-HTS-0001-9
	Specific	cation
Title:	METAL-PLATE CHIP F	RESISTOR; LOW OHM
Style:	RLP16,20,32,63, MLP2	20,63
	RoHS COMPLIA Halogen and Ant	ANCE ITEM timony Free
Proc are If yc Agro	duct specification contained in this subject to change at any time with ou have any questions or a Purcha eement is necessary, please conta	s specification nout notice using Specification for any quality act our sales staff.
		这重模株式會社 AMAYA ELECTRIC CO., LTD. Hokkaido Research Center Approval by: T. Sannomiya Drawing by: M. Shibuya
Note: Stock conditior Temperature: +5° Relative humidity: The period of gua	ns C ~ +35℃ 25% ~ 75% rantee: Within 2 year from shipme Solderability shall be satis	ent by the company. fied.

/9

Title:	METAL–PLATE CHIP RESISTOR; LOW OHM
	RLP16, 20, 32, 63, MLP20,63

Page: 1/19

1. Scope

1.1 This specification covers the detail requirements for metal-plate chip resistor ; low ohm, style of RLP16, 20, 32, 63, MLP20,63.

1.2 Applicable documents

JIS C 5201–1: 1998, JIS C 5201–8: 1998, JIS C 5201–8–1: 1998 IEC60115–1: 1999, IEC60115–8: 1989 Amendment 1: 1992, IEC60115–8–1: 1989

2. Classification

Type designation shall be the following form.

(Example)	RLP	63	К	R010	F	TE
	1	2	3	4	5	6
	Sty	le				
	1 Metal - plat	e chip resi	stor; low oh	ım —	L Style	
	2 Size					
	3 Temperatu	re coefficie	nt of resista	ance	Ν	±70×10 ⁻⁶ / °C
					K	±100×10 ⁻⁶ / °C
					–(Dash)	±150×10 ⁻⁶ / °C
	4 Rated resis	tance				

- 5 Tolerance on rated resistance
- 6 Packaging form

3. Rating

3.1 The ratings shall be in accordance with Table-1.

Table-1(1)

Style	Rated dissipation (W)	Rated current (A)	Temperature resistance	Temperature coefficient of resistance (10 ⁻⁶ / °C)		Tolerance on rated resistance				
			K	100						
	0.00	8.1	N	±70	5					
RLP16	0.33	F 7	K	100	10					
		5.7	N	±70	10					
		11.1	K	100	4					
		11.1	N	±70	4	F(±1%) J(±5%)				
		10.0	K	100	F					
			N	±70	5					
		9.1	K	100	6					
	0.5		N	±70	0					
NLF20	0.5	7.9	K	100	0					
			N	±70	0					
		7.4	K	100	0					
		7.4	N	±70	9					
		70	K	100	10					
		7.0		±70	10					
MI P20	10	10.0	K	100	10					
IVILP20	1.0	1.0	1.0	1.0	1.0	10.0	N	±70	10	

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Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

Page: 2/19

/9

	Table-1(2)						
Stulo	Rated dissipation	Rated current	Temperature coefficient of		Rated resistance	Tolerance on rated	
Olyle	(W)	(A)	resistance	<u>(10^{−6}/ °C)</u>	(mΩ)	resistance	
		21.6	-(Standard)	±150	1		
		51.0	K	±100	I		
		22.3	K	±100	C		
			Ν	±70	Z		
		10.0	K	±100	2		
		10.2	Ν	±70	3		
		15.0	K	±100	Λ		
		13.0	Ν	±70	4		
		111	K	±100	F		
	14.1	Ν	±70	5	F(±1%)		
	12.9	K	±100	6			
		Ν	±70	0			
	11.0	K	±100	7			
INLF JZ	1.0	11.9	Ν	±70	1	J(±5%)	
		11.1	K	±100	o		
			Ν	±70	0		
		10.5	K	±100	٥		
			N	±70	3		
		10	K	±100	10		
		10	N	±70	10		
	0.1	K	±100	12			
	5.1	N	±70	12	_		
	87	K	±100	13			
		8.7	Ν	±70	15		
		0.1	K	±100	15		
		0.1	N	±70	IJ		

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

3/19 Page:

	Table-1(3)					
Style	Rated dissipation (W)	Rated current (A)	Temperature resistance	coefficient of (10 ⁻⁶ / °C)	Rated resistance (mΩ)	Tolerance on rated resistance
		447	-(Standard)	±150	,	
	2.0	44.7	K	±100	1	
			K	+100		
		22.3	N	+70	2	
			ĸ	+100		-
		18.2	N	±100	3	
			K	±100		-
		15.8	N	⊥100 ⊥70	4	
			N K	<u> </u>		
		14.1		±100	5	
				±70		
		12.9	n Ni	±100	6	E (140())
RLP63			N	±70		F(±1%)
	1.0	11.9	ĸ	±100	7	J(±5%)
			N	±70		
		11.1	K	±100	8	
			N	±70	-	-
		10.5	K	±100	9	
		1010	N	±70	-	
		10	K	±100	10	
		10	N	±70	10	-
		9.1	K	±100	12	
			N	±70	12	
		8.1	K	±100	15	
			Ν	±70		
		63.2	K	100	0.5	I(E 0/)
			N	±70		J(±5%)
		36.5	K	100	15	
			N	±70	1.5	
		31.6	K	100	2	
			Ν	±70	2	
		20.2	K	100	25	
		20.2	N	±70	2.5	
		25.0	K	100	2	
		23.0	Ν	±70	3	
		22.2	K	100	1	
MLP63 2.0	20	22.3	N	±70	4	
	2.0	20	K	100	5	F(±1%)
		20	N	±70	5	J(±5%)
		10.0	K	100	6	
		10.2	N	±70	0	
		16.0	K	100	7	
		10.9	N	±70	/	
		15.0	K	100	0	
		10.0	N	±70	0	
		14.0	K	100	0	
		14.9	N	±70	3	
		1/1	K	100	10	
		14.1	N	±70		

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/9

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

Page: 4/19

Table-1(4)					
Style	Isolation voltage (V)	Category temperature range (°C)			
RLP16					
RLP20					
MLP20	100	55 155			
RLP32	100	-55~+155			
RLP63					
MLP63					

3.2 Climatic category		
55/155/56	Lower category temperature	–55 ℃
	Upper category temperature	+155 °C
	Duration of the damp heat, steady stat	te test 56days
3.3 Stability class		
5%	Limits for change of resistance:	
	–for long–term tests $\pm 5\%$	
	-for short-term tests $\pm 1\%$	

3.4 Derating

The derated values of dissipation at temperature in excess of 70 °C shall be as indicated by the following curve.



d.c. or a.c. r.m.s. voltage calculated from the square root of the product of the rated resistance and the rated dissipation.

$$E = \sqrt{P \cdot R}$$

3.6 Rated current

3.5 Rated voltage

The rated current calculated from the square root of the quotient of the rated resistance and the rated dissipation.

$$I = \sqrt{P / R}$$

I: Rated current (A)

R: Rated resistance (Ω)

The rated current shall be corresponding to rated voltage.

4. Packaging form

The standard packaging form shall be in accordance with Table-2.

Table-2

Symbol	Packaging form		Standard packaging quantity / units	Application
TP	Paper taping	8mm width, 4mm pitches	5,000 pcs.	RLP16, 20, 32, MLP20
TE	Embossed taping	12mm width, 4mm pitches	4,000 pcs.	RLP63, MLP63

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Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

Page: 5/19

5. Dimensions

5.1 The resistor shall be of the design and physical dimensions in accordance with Figure-2 and Table-3.





Figure-2

	Table-3(1)					Unit: mm
Style	Rated resistance (m Ω)	L	W	Н	С	d
	5	10.01	00.04	0.35±0.10	0.2±0.1	0.6±0.1
RLP16	10	1.6±0.1	0.8±0.1	0.3±0.1	0.2±0.1	0.3±0.1
	4			0.35±0.10	0.3 <u>+</u> 0.1	0.7 <u>+</u> 0.2
	5			0.35±0.10	0.3±0.1	0.6±0.2
	6			0.35 <u>+</u> 0.10	0.3 <u>+</u> 0.1	0.47 <u>+</u> 0.20
RLP20	8	2.0±0.15	1.25±0.15	0.22 <u>+</u> 0.10	0.3 <u>+</u> 0.1	0.6 <u>+</u> 0.2
	9			0.22±0.10	0.3±0.1	0.52±0.20
	10			0.22 <u>+</u> 0.10	0.3 <u>+</u> 0.1	0.47 <u>+</u> 0.20
MLP20	10			0.22 <u>+</u> 0.10	0.3 <u>+</u> 0.1	0.47 <u>+</u> 0.20
	1			0.32±0.15	1.1±0.25	1.1±0.25
	2			0.32±0.15	0.5±0.25	0.5±0.25
-	3		1.6±0.15	0.35±0.10	0.7±0.25	1.3±0.25
	4	-		0.35±0.10	1.1±0.25	1.1±0.25
	5	-		0.35±0.10	1.0±0.25	1.0±0.25
	6	3.2±0.15		0.35±0.10	0.85±0.25	0.85±0.25
RLP32	7			0.35±0.10	0.7±0.25	0.7±0.25
	8			0.35±0.10	0.6±0.25	0.6±0.25
	9			0.3±0.1	0.75±0.25	0.75±0.25
	10			0.28±0.10	0.5±0.25	0.5±0.25
	12			0.22±0.10	0.65±0.25	0.65±0.25
	13	-		0.22±0.10	0.65±0.25	0.65±0.25
	15			0.22±0.10	0.5±0.25	0.5±0.25
	1		3.2±0.25	0.38±0.15	2.2±0.25	2.2±0.25
	2			0.38±0.15	1.1±0.25	1.1±0.25
	3			0.45±0.15	2.2±0.25	2.2±0.25
	4			0.35±0.15	2.2±0.25	2.2±0.25
	5			0.34±0.15	1.95±0.25	1.95±0.25
	6	62.025		0.34 <u>+</u> 0.15	1.75±0.25	1.75 <u>+</u> 0.25
RLP03	7	0.3±0.25	3.1±0.25	0.35±0.15	1.4 <u>+</u> 0.25	1.4±0.25
	8			0.35±0.15	1.1 <u>+</u> 0.25	1.1±0.25
	9			0.35±0.15	0.8 <u>+</u> 0.25	0.8 <u>+</u> 0.25
	10]		0.23±0.15	1.75±0.25	1.75±0.25
	12]		0.23±0.15	1.4 <u>+</u> 0.25	1.4 <u>+</u> 0.25
-	15			0.23±0.15	0.95±0.25	0.95±0.25

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Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

6/19 Page:



		Tab	ole-3(2)			Unit: mm
Style	Rated resistance (m Ω)	L	W	Н	С	d
	0.5			0.58±0.15	2.2 <u>+</u> 0.25	2.2 <u>+</u> 0.25
-	1.5			0.38±0.15	1.5±0.25	1.5 <u>+</u> 0.25
	2		3.1±0.25	0.58±0.15	2.2 <u>+</u> 0.25	2.2 <u>+</u> 0.25
	2.5]		0.45±0.15	2.4±0.25	2.4±0.25
	3	6.3±0.25		0.45±0.15	2.2 <u>+</u> 0.25	2.2 <u>+</u> 0.25
MI D62	4			0.34±0.15	2.2 <u>+</u> 0.25	2.2 <u>+</u> 0.25
IVILF 03	5			0.51±0.15	1.1 <u>+</u> 0.25	1.1±0.25
	6			0.5 <u>+</u> 0.15	1.1 <u>+</u> 0.25	1.1 <u>+</u> 0.25
	7			0.5±0.15	0.6 <u>+</u> 0.25	0.6±0.25
-	8			0.35±0.15	1.1±0.25	1.1±0.25
	9			0.35 <u>+</u> 0.15	0.8 <u>+</u> 0.25	0.8 <u>+</u> 0.25
	10]		0.35±0.15	0.5±0.25	0.5±0.25

5.2 Net weight (Reference)

Style	Rated resistance (m Ω)	Net weight (mg)
RLP16	5	2
	10	
RLP20	4 to 10	3
MLP20	10	3
	1	12
	2	11
	3	11
	4	12
	5	11
	6	11
RLP32	7	11
	8	10
	9	9
	10	9
	12	8
	13	7
	15	6

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

5.2 Net weight (Reference)

Style Rated resistance (m Ω)		Net weight (mg)
	1	50
	2	42
	3	57
	4	43
	5	43
	6	41
RLP03	7	42
	8	41
	9	40
	10	30
	12	26
	15	26
	0.5	90
	1.5	47
	2	77
	2.5	63
	3	63
	4	48
IVILF03	5	64
	6	55
	7	55
	8	43
	9	40
	10	41

6. Marking

The Rated resistance of RLP16 should not be marked standard.

6.1 RLP63, MLP63

The rated resistance shall be marked in 4 characters consisting of 3 figures and a letter and marked on over coat side.

 $(\text{Example}) \quad ``\text{R010''} \rightarrow 0.01 \ [\Omega] \rightarrow 10 \ [\text{m}\Omega]$

 $\text{``1L50''} \rightarrow 0.0015 \, [\Omega] \rightarrow 1.5 \, [\text{m}\Omega]$

6.2 RLP20, 32, MLP20

The rated resistance shall be marked in combination of two figures and underlines and marked on over coat side.

(Example) " $\underline{05}$ " \rightarrow 0.005 [Ω] \rightarrow 5 [m Ω]

"<u>10</u>" \rightarrow 0.01 [Ω] \rightarrow 10 [mΩ]

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Page: 7/19

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

<u>8/19</u> Page:

7. Performance

7.1 The standard condition for tests shall be in accordance with Sub-clause 4.2, JIS C 5201-1: 1998.

7.2 The performance shall be satisfied in Table-4.

	Table-4(1)							
No.	Test items	Condition of test (JIS C 5201–1)			Performance requirements			
1	Visual examination	Sub-clause 4.4.1 Checked by visual examination.				As in 4.4.1 The marking shall be legible, as checked by visual examination.		
2	Dimension	Sub-claus	se 4.4.2				As specified in Table-3 of this	
	Resistance	Resistance the substra Current terminal	e value shall be ate of the followin b b b c terr oltage terminal	specification. As in 4.5.2 The resistance value shall correspond with the rated resistance taking into account the specified tolerance.				
			D : (Un	it:mm		
		Style	Resistance value(m Ω)	а	b	С		
		RLP16	5 10	0.6 1.0	0.8 0.6	0.8		
		RLP20	4 to 10	0.8	0.95	1.35		
		MLP20	10	0.8	0.95	1.35		
			1	1.0	1.45			
			2	2.1	0.9			
		RLP32	3	0.8	1.55	1.7		
			4 5 and 0	1.0	1.45			
			5 and 6	1.4	1.25			
			1	2.1	0.9	4.0		
			2	4.0	1.8	4.0		
		RLP63	3.4	1.8	2.9			
			5	2.4	2.6	3.5		
			6 to 15	4.0	1.8			
		MI P63	0.5,2 to 4	1.8	2.9	35		
			1.5, 5 to 10	4.0	1.8	0.0		
	Thickness of copper clad: 0.035mm 4-Terminal method Measurement current: 1(A)							
		Note: The	measuring app	paratus o	correspon	nding to		
		DC Low- CORPOF	ohm Mater (1A) RATION.	of AX-	1152D to	r ADEX		
3	Voltage proof	Sub-claus	se 4.7				No breakdown or flash over	
	Method: 4.6.1.4(See Figure–5)							
		Test voltage: Alternating voltage with a peak value						
		Duration: 6	165 the insulation 30 s+5 s	vonage	•			
		Insulation	resistance				R≥1 GΩ	
		Test voltac	e: Insulation vol	tage			-	
		Duration:	í min.	5				

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Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

9/19 Page:

/9

	Table-4(2)					
No	Test items	Condition of test (JIS C 5201–1)	Performance requirements			
4	Solderability	Sub-clause 4.17 Without aging Flux: The resistors shall be immersed in a non-activated soldering flux for 2 s. Bath temperature: 235 °C±5 °C Immersion time: 2 s±0.5 s	As in 4.17.4.5 The terminations shall be covered with a smooth and bright solder coating.			
5	Mounting Overload (in the mounted state) Solvent resistance of the marking	Sub-clause 4.31 Substrate material: Epoxide woven glass Test substrate: RLP16: Figure-3-1 RLP20, MLP20 Figure-3-2 RLP32 Figure-3-3 RLP63, MLP63 Figure-3-4 Sub-clause 4.13 The applied voltage shall be 2.5 times the rated voltage or the current corresponding to. Duration: 2 s Visual examination Resistance Sub-clause 4.30 Solvent: 2-propanol Solvent temperature: 23 °C±5 °C Method 1 Rubbing material: cotton wool Without recovery	No visible damage ∆R ≤ ±1% Legible marking			
6	Mounting	Sub-clause 4.31				
	Bound strength of the end face plating	Substrate material: Epoxide woven glass Test substrate: Figure-4 Sub-clause 4.33 Bent value: 3mm(RLP16, 20, 32, MLP20) 1 mm(RLP63, MLP63) Resistance	ΔR≤±1%			
		Visual examination	No visible damage			

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

10/19 Page:

	Table-4(3)							
No	Test items	S	Condition of test (JIS C 5201–1)	Performance requirements				
7	Resistance to heat	soldering	Sub-clause 4.18 (JEITA RC-2144 2.3.2) Substrate material: Epoxide woven glass Test substrate: Figure-3-1 T ₁ :Pre-heat minimum temp.:150±5 °C T ₂ :Pre-heat maximum temp.:180±5 °C T ₃ :Soldering temp.:220 °C T ₄ :Peak temp.:250 °C t ₁ :Pre-heat duration:120±5 s t ₂ :Soldering duration:60 to 90 s t ₃ :Peak duration(T ₄ -5°C):20 to 40 s Pre-reflow soldering: 1 time (Initial measurements) Reflow soldering: 3 times T ₄ T ₃ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₂ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₂ T ₁ T ₂ T ₁ T ₂ T ₁ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₁ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₂ T ₁ T ₁ T ₁ T ₁ T ₁ T ₂ T ₁ T ₁ T ₁ T ₁ T ₁ T ₁ T ₁ T ₂ T ₁ T ₁					
	Component resistance	solvent	Visual examination Resistance Sub-clause 4.29 Solvent: 2-propanol Solvent temperature: 23 °C±5 °C Method 2 Recovery: 48 h Visual examination Resistance	No visible damage $\Delta R \le \pm 1\%$ No visible damage $\Delta R \le \pm 1\%$				
8	Mounting Adhesion		Sub-clause 4.31 Substrate material: Epoxide woven glass Test substrate: Figure-3-1 Sub-clause 4.32					
	Rapid change tem	perature	Force: 5 N Duration: 10 s±1 s Visual examination Sub-clause 4.19 Lower category temperature:-55 °C Upper category temperature:+155 °C Duration of exposure at each temperature: 30 min. Number of cycles: 5 cycles. Visual examination Resistance	No visible damage $\label{eq:linear} \begin{split} &No \text{ visible damage} \\ &\DeltaR \leq \pm 1\% \end{split}$				

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<u>11/1</u>9 Page:

	Table–4(4)						
No	Test items	Condition of test (JIS C 5201–1)	Performance requirements				
9	Climatic sequence	Sub-clause 4.23					
	–Dry heat	Sub-clause 4.23.2					
		Test temperature: +155 °C					
		Duration: 16 h					
	–Damp heat, cycle	Sub-clause 4.23.3					
	(12+12hour cycle)	Test method: 2					
	First cycle	Test temperature: 55 °C					
		[Severity(2)]					
	–Cold	Sub-clause 4.23.4					
		Test temperature –55 °C					
		Duration: 2h					
	-Damp neat, cycle	Sub-clause 4.23.6					
	(12+12hour cycle)	Test method: 2					
	Remaining cycle	lest temperature: 55 °C					
		[Severity (2)]					
	D.C. load	Number of cycles. 5 cycles					
	-D.C. 1040	The applied current shall be the rated current					
		Duration: 1 min					
		Visual examination	No visible damage				
		Resistance	ΔR≤±5%				
10	Mounting	Sub-clause 4.31					
	5	Substrate material: Epoxide woven glass					
		Test substrate: RLP16: Figure-3-1					
		RLP20, MLP20 Figure-3-2					
		RLP32 Figure-3-3					
		RLP63, MLP63 Figure-3-4					
	Endurance at 70 °C	Sub-clause 4.25.1					
		Ambient temperature: 70 °C±2 °C					
		Duration: 1000 h					
		The current shall be applied in cycles of 1.5 h on					
		and 0.5 h.					
		The applied current shall be the rated current					
		Examination at 48 n, 500 n and					
		1000 II. Visual examination	No visible damage				
		Resistance	ΔR≤±5%				
11	Mounting	Sub-clause 4.31					
		Substrate material: Epoxide woven glass					
		Test substrate: Figure-3-1					
	Variation of resistance with	Sub-clause 4.8	As in Table–1				
	temperature	+20 °C / +155 °C					

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

Page: 12/19

/9

		Table-4(5)	
No	Test items	Condition of test (JIS C 5201–1)	Performance requirements
12	Mounting Damp heat, steady state	Sub-clause 4.31 Substrate material: Epoxide woven glass Test substrate: Figure-3-1 Sub-clause 4.24 Ambient temperature: 40 °C \pm 2 °C Relative humidity: 93 $^{+2}_{-3}$ % Without current applied. Visual examination Resistance	No visible damage Legible marking ΔR ≤ ±5%
13	Dimensions (detail)	Sub-clause 4.4.3	As in Table-4
	Mounting Endurance at upper category temperature	Sub-clause 4.31 Substrate material: Epoxide woven glass Test substrate: Figure-3-1 Sub-clause 4.25.3 Ambient temperature:155 °C±2 °C Duration: 1000 h Examination at 48 h, 500 h and 1000 h: Visual examination Resistance	No visible damage ΔR ≤ ±5%

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63





Style	Rated resistance (m Ω)	а	b	С	d	е
	5	0.6	0.8	0.0	22	62
KLP IO	10	1.0	0.6	0.0	2.2	0.2
RLP20	4 to 10	0.0	0.05	1 25	27	5.05
MLP20	10	0.8	0.95	1.55	2.7	5.95
	1	1.0	1.45			
	2	2.1	0.9		3.9	5.35
D1 D22	3	0.8	1.55	17		
RLF32	4	1.0	1.45	1.7		
	5 and 6	1.4	1.25			
	7 to 15	2.1	0.9			
	1	1.5	3.05			
	2	4.0	1.8		7.6	3.5
RLP63	3, 4	1.8	2.9	3.5		
	5	2.4	2.6			
	6 to 15	4.0	1.8			
	0.5, 2 to 4	1.8	2.9	0.5 7.0		0.5
IVILP03	1.5, 5 to 10	4.0	1.8	3.5	0.1	3.5

Figure-3-1 RLP16, 20, 32, 63, MLP20, 63TEST SUBSTRATE

Remark: Material: Epoxy resin based as glass fabric(Specified in JIS C 6484).

Thickness: 1.6mm Thickness of copper clad: 0.035mm

Product specification contained in this specification are subject to change at any time without notice.

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63



Figure-3-2 RLP20, MLP20 TEST SUBSTRATE

Remark: Material: Epoxy resin based as glass fabric(Specified in JIS C 6484).

Thickness: 1.6mm

Thickness of copper clad: 0.035mm



Figure-3-3 RLP32 TEST SUBSTRATE

Remark: Material: Epoxy resin based as glass fabric(Specified in JIS C 6484).

Thickness: 1.6mm Thickness of copper clad: 0.07mm

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Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63



Figure-3-4 RLP63, MLP63 TEST SUBSTRATE

Remark: Material: Epoxy resin based as glass fabric(Specified in JIS C 6484).

Thickness: 1.6mm Thickness of copper clad: 0.07mm

Remark: In the case of connection by connector, the connecting terminals are gold plated.

However, the plating is not necessary when the connection is made by soldering.



RLP16, 20, 32, MLP20 BOUND STRENGTH OF THE END FACE PLATING TEST SUBSTRATE

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Title:	METAL-PLATE CHIP RESISTOR; LOW OHM
	RLP16, 20, 32, 63, MLP20,63





Figure-4

Remark. Material: Epoxy resin based as glass fabric(Specified in JIS C 6484).

Thickness: 1.6mm Thickness of copper clad: 0.035mm



Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

9. Taping

- 9.1 Applicable documents JIS C 0806–3: 1999, EIAJ ET–7200B: 2003
- 9.2 Taping dimensions
- 9.2.1 Paper taping (8mm width, 4mm pitches)

Taping dimensions shall be in accordance with Figure-6 and Table-5.



Figure-6

	Unit: mm			
Style	А	В	t 1	t 2
RLP16	1.15±0.15	1.9 ± 0.2	0.6±0.1	0.8max.
RLP20	1 65+0 15	25,02	06-01	0.8may
MLP20	1.05±0.15	2.0±0.2	0.0±0.1	U.OITIAX.
RLP32	2.00±0.15	3.6 <u>+</u> 0.2	0.6 <u>+</u> 0.1	0.8max.

9.2.2 Embossed taping (12mm width, 4mm pitches)

Taping dimensions shall be in accordance with Figure-7 and Table-6.



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Page: 18/19

- 1). The cover tapes shall not cover the sprocket holes.
- 2). Tapes in adjacent layers shall not stick together in the packing.
- 3). Components shall not stick to the carrier tape or to the cover tape.
- 4). Pitch tolerance over any 10 pitches ±0.2mm.
- 5). The peel strength of the top cover tape shall be with in 0.1N to 0.5N on the test method as shown in the following RLP16, 20, 32, MLP20: Figure–8, RLP63, MLP63: Figure–9.
- 6). When the tape is bent with the minimum radius for (RLP16, 20, 32, MLP20: 25mm, RLC63, MLP63: 30mm) the tape shall not be damaged and the components shall maintain their position and orientation in the tape.
- 7). In no case shall there be two or more consecutive components missing. The maximum number of missing components shall be one or 0.1%, whichever is greater.



Figure-9

Title: METAL-PLATE CHIP RESISTOR; LOW OHM RLP16, 20, 32, 63, MLP20,63

Page: 19/19

9.3 Reel dimension

Reel dimensions shall be in accordance with the following Figure–10 and Table–7. Plastic reel (Based on EIAJ ET–7200B)



Note : Marking label shall be marked on a place of Marking A or two place of Marking A and B.

9.4 Leader and trailer tape.



10. Marking on package

The label of a minimum package shall be legibly marked with follows.

10.1 Marking A

(1) Classification

(Style, Temperature coefficient of resistance, Rated resistance, Tolerance on rated resistance, Packaging form)

(2) Lot number (3) Quantity (4) Manufacturer's name or trade mark (5) Others

10.2 Marking B (KAMAYA Control label)

Product specification contained in this specification are subject to change at any time without notice.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Kamaya:

RLP63KR010FTERLP32KR005JTPRLP32KR015FTPRLP32KR002FTPRLP20KR010FTPRLP32KR003FTPRLP32KR005FTPRLP32KR010JTPRLP63KR002FTERLP32KR004FTPRLP32KR010FTPRLP32KR008FTPRLP63KR005FTERLP16KR010FTPRLP32KR007FTPRLP32KR015JTP

Walsin:

RLP32KR003JTP