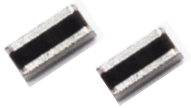
APPROVAL SHEET

Product Name	**: Low Ohm Metal Foil Chip Resistor (Long Terminal)**
Part No.	**: RWFL**
Description	**: Size 0306, 0508, 0612, 1020, 1225**

For more contact information, please refer to our website: www.rideetech.com

Low Ohm Metal Foil Chip Resistor (Long Terminal) – RWFL Series

Applications



— Measuring instrument

— Industrial / Power supply

— Battery management system

Features

— High power capability

— Stable performance and high reliability with a very low TCR

— Halogen free and lead-free

— RoHS compliant

— AEC-Q200 Compliant

Part Number Explanation

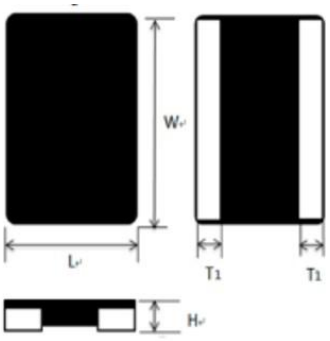
RWFL	0612	15	F	R100	T	S
Product	**Size (Inch)**	**Rated Power**	**Tolerance**	**Resistance**	**Packaging**	**Functional**
Low Ohm Metal Foil Chip Resistor (Long Terminal)	0306 0508 0612 1020 1225	05 : 0.5W 10 : 1.0W 15 : 1.5W 20 : 2.0W 30 : 3.0W	F : ±1.0% J : ±5.0%	R005=5mΩ R010=10mΩ R100=100mΩ	T=Tape & Reel	S= Standard

Standard Electrical Specifications

Type	Power Rating at 70℃	Resistance Tolerance (%)	Temperature Coefficient (TCR; ppm/℃)	Resistance Range
RWFL0306	0.5W	1%, 5%	±150	5mΩ≦R≦19mΩ
			±100	20mΩ≦R≦100mΩ
RWFL0508	1W	1%, 5%	±100	3mΩ≦R≦19mΩ
			±50	20mΩ≦R≦100mΩ
RWFL0612	1.5W	1%, 5%	±100	3mΩ≦R≦19mΩ
			±50	20mΩ≦R≦100mΩ
RWFL1020	2W	1%, 5%	±100	3mΩ≦R≦19mΩ
			±50	20mΩ≦R≦100mΩ
RWFL1225	3W	1%, 5%	±100	3mΩ≦R≦19mΩ
			±50	20mΩ≦R≦100mΩ

Notes:
1. Operating Temperature Range:-55℃~+175℃
2. Beyond the above specification also can meet the special requirements. For detail questions, please contact us freely.
3. Functional code: S

Dimension

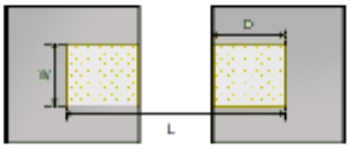


Unit: mm

Type	Resistance (mΩ)	L	W	I1	H
RWFL0306	5 - 19	0.85±0.20	1.60±0.20	0.55±0.20	0.25±0.15
	20 - 100	0.85±0.20	1.60±0.20	0.55±0.20	0.25±0.15
RWFL0508	3 - 19	1.35±0.20	2.00±0.20	0.60±0.20	0.30±0.20
	20 - 100	1.35±0.20	2.00±0.20	0.60±0.20	0.30±0.20
RWFL0612	3 - 19	1.65±0.20	3.20±0.20	0.60±0.20	0.30±0.20
	20 - 100	1.65±0.20	3.20±0.20	0.60±0.20	0.30±0.20
RWFL1020	3 - 19	2.60±0.30	5.00±0.20	0.60±0.20	0.55±0.30
	20 - 100	2.60±0.30	5.00±0.20	0.60±0.20	0.55±0.30
RWFL1225	3 - 19	3.20±0.30	6.40±0.20	0.60±0.20	0.60±0.30
	20 - 100	3.20±0.30	6.40±0.20	0.60±0.20	0.60±0.30

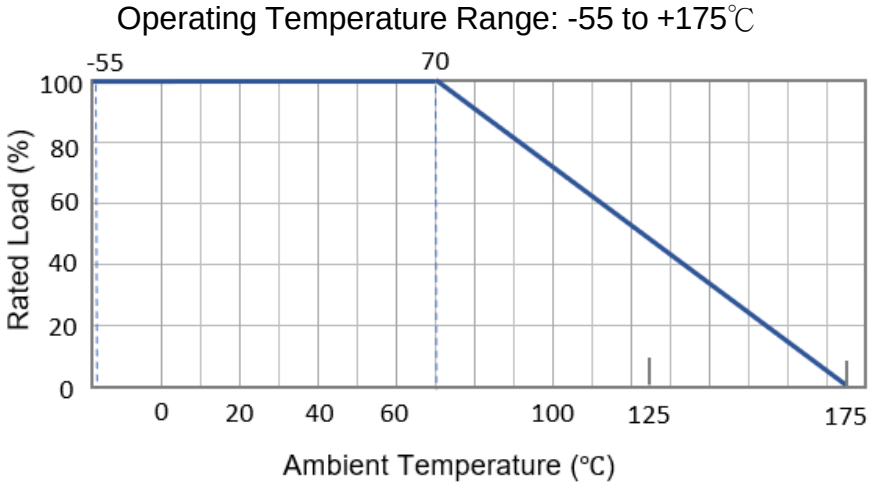
Recommend Land Pattern Design

Type	W	D	L
RWFL0306	1.70	0.68	1.61
RWFL0508	2.20	0.70	2.00
RWFL0612	3.40	0.90	2.40
RWFL1020	5.20	1.40	4.00
RWFL1225	6.60	1.00	4.20



Unit:mm

Derating curve



Recommended Customer Soldering Parameters

Recommended IR Reflow Soldering Conditions

Preliminary heating: 150℃~200℃, 120s max
Soldering: 217℃, 150s max
Peak temperature: 260℃, 30s max

Marking

- **0306 : No Marking**
- **0508/0612/1020/1225: 4 digits marking**

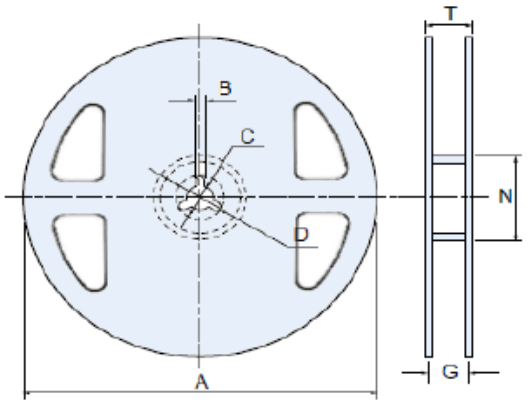
Example:

Resistance	50mΩ
Digits Code	R050

Reliability Test and Requirement

Test Item	Test Method	Procedure	Requirements
Temperature Coefficient of Resistance (T.C.R)	JIS-C-5201-1 4.8 IEC-60115-1 4.8	Temperature：(T1. +25℃) ~ (T2. +125℃) TCR(ppm/℃) = (R2-R1)/R1×1/(T2-T1)×10^6 (+25~ -55℃ please contact factory)	As Spec
Short Time Overload	JIS-C-5201-1 4.13 IEC-60115-1 4.13	2.5 × Rated power for 5 seconds	ΔR≦ ±1.0%
Insulation Resistance	JIS-C-5201-1 4.6 IEC-60115-1 4.6	Apply the maximum overload voltage (DC) for 1minute	△R ≧10GΩ
Solderability	JIS-C-5201-1 4.17 IEC-60115-1 4.17	After immersing flux, dip in the 245±2℃ molten solder bath for 3±0.5 sec.	Over 95% of termination must be covered with Solder.
Resistance to Soldering Heat	JIS-C-5201-1 4.18 IEC-60115-1 4.18	260±5℃ for 10 seconds.	ΔR≦ ±1.0%
Operational Life	AEC-Q200 7.8	Test 1000hr @ T=125℃ at specified rated power. Measurement at 24±2 hours after test conclusion.	ΔR≦ ±1.0%
Biased Humidity	AEC-Q200 7.7	1000 hours 85℃/85%RH. 10% of operating power. Measurement at 24 ±2 hours after test conclusion.	ΔR≦ ±1.0%
High Temperature Exposure (Storage)	AEC-Q200 7.3	1000 hrs. @ T=155℃. Unpowered. Measurement at 24 ±2 hours after test conclusion.	ΔR≦ ±1.0%
Temperature Cycling	AEC-Q200 7.4	1000 Cycles (-55°C to +155°C). Measurement at 24±2 hours after test conclusion.	ΔR≦ ±2.0%
Terminal Strength	AEC Q200-006	Force 1.8 Kg for 60 seconds.	No mechanical damage
Bending Strength	JIS-C-5201-1 4.33 IEC-60115-1 4.33	Bend 2mm for 0306、0508、0612、1020、1225	ΔR≦ ±1.0%
Mechanical Shock	AEC-Q200 7.13	Test Peak value:100g's,Wave:Hail-sine, Duration:6ms,Velocity:12.3ft/sec.	Within product specification tolerance and no visible damage.
Vibration	AEC-Q200 7.14	5 g's for 20 min., 12 cycles each of 3 orientations. Test from 10-2000 Hz.	ΔR≦ ±1.0%

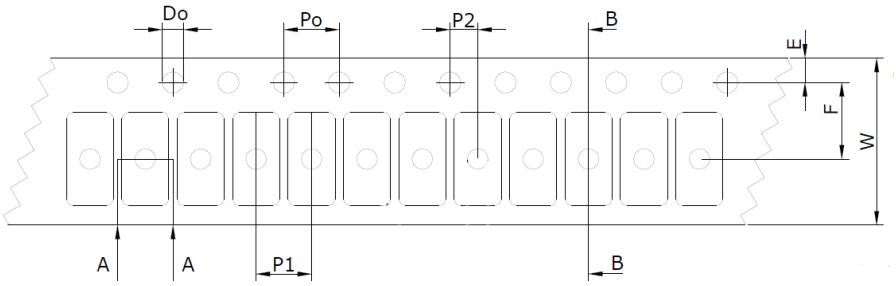
Packaging Information



Unit : mm

Size	Packaging Q'ty	A	N	C	D	B	G	T
0306	5kpcs/Reel	178.0±1.0	60.0±1.0	13.0±0.7	20(Min.)	2.0±0.5	9.5±0.1	11.5±1.0
0508	5kpcs/Reel	178.0±1.0	60.0±1.0	13.0±0.7	20(Min.)	2.0±0.5	9.5±0.1	11.5±1.0
0612	5kpcs/Reel	178.0±1.0	60.0±1.0	13.0±0.7	20(Min.)	2.0±0.5	9.5±0.1	11.5±1.0
1020	4kpcs/Reel	178.0±1.0	60.0±1.0	13.0±0.7	20(Min.)	2.0±0.5	13.5±1.0	15.5±1.0
1225	4kpcs/Reel	178.0±1.0	60.0±1.0	13.0±0.7	20(Min.)	2.0±0.5	13.5±1.0	15.5±1.0

Tapping Specification Tapping Specification



Unit : mm

Size	A	B	W	F	E	P1	P2	P0	D
0306	1.10±0.20	1.90±0.20	8.00±0.30	3.50±0.05	1.75±0.10	4.00±0.10	2.00±0.05	4.00±0.10	1.50+0.10/-0
0508	1.60±0.10	2.40±0.20	8.0±0.20	3.50±0.05	1.75±0.10	4.00±0.05	2.00±0.05	4.00±0.05	1.50+0.10/-0
0612	1.90±0.10	3.50±0.20	8.00±0.20	3.50±0.05	1.75±0.10	4.00±0.05	2.00±0.05	4.00±0.10	1.50+0.10/-0
1020	2.80±0.10	5.40±0.20	12.0±0.30	5.5±0.05	1.75±0.10	4.00±0.10	2.00±0.05	4.00±0.05	1.50+0.10/-0
1225	3.38±0.10	6.68±0.10	12.0±0.30	5.50±0.10	1.75±0.10	4.00±0.10	2.00±0.05	4.00±0.10	1.50+0.10/-0