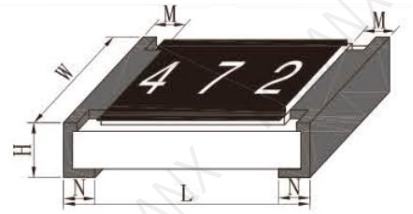
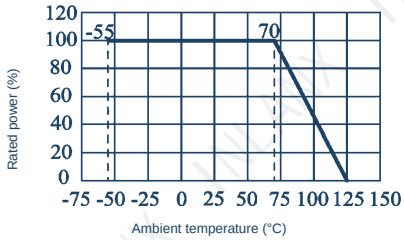
ARI Automotive RoHS Film Chip Fixed Resistors

Outline Drawing



Derating Curve





Quality grade and generic specification: AEC-Q200. Detail specification: Q/RU 640-2024.

Outline Dimensions • mm

Model	L	W	H	M	N
ARI0603G	0.60±0.05	0.30±0.05	0.23±0.05	0.10±0.05	0.15±0.05
ARI1005	1.00±0.15	0.50±0.10	0.35±0.10	0.20±0.15	0.25±0.10
ARI1608	1.60±0.15	0.80±0.15	0.50±0.15	0.30±0.15	0.30±0.15
ARI2012	2.00±0.20	1.25±0.20	0.55±0.15	0.38±0.20	0.38±0.20
ARI3216	3.20±0.20	1.60±0.20	0.60±0.20	0.38±0.25	0.38±0.25
ARI3225	3.20±0.20	2.50±0.20	0.60±0.20	0.50±0.25	0.50±0.25
ARI5025	5.00±0.20	2.50±0.20	0.60±0.20	0.60±0.25	0.60±0.25
ARI6332	6.30±0.20	3.20±0.20	0.60±0.20	0.60±0.25	0.60±0.25

Electrical Specifications

Maximum current applies to zero-ohm products only; tolerance and TCR apply to non-zero-ohm products only.

Model	Power W	Resistance Ω	Tolerance %	Limit V	Max. current A	TCR ×10^-6/℃
ARI0603G	0.05	10 Ω~1 MΩ	±1, ±2, ±5	25	—	±250
ARI1005	0.05	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	30	0.5	1≤R<10: ±250; 10≤R≤10M: ±100, ±250
ARI1608	0.1	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	50	0.8	1≤R<10: ±250; 10≤R≤10M: ±100, ±250
ARI2012	0.15	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	50	1	1≤R<10: ±250; 10≤R≤10M: ±100, ±250
ARI3216	0.25	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	100	1.6	1≤R<10: ±250; 10≤R≤10M: ±100, ±250
ARI3225	0.5	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	150	2	1≤R<10: ±250; 10≤R≤10M: ±100, ±250
ARI5025	0.8	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	150	2	1≤R<10: ±250; 10≤R≤10M: ±100, ±250
ARI6332	1	0 Ω; 1 Ω~10 MΩ	±1, ±2, ±5	200	2	1≤R<10: ±250; 10≤R≤10M: ±100, ±250

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Main Inspection Items

Non-zero-ohm: ΔR≤±(listed value %R+0.05 Ω). UR: rated voltage; Umax: limiting element voltage.

Item	Non-zero ΔR	Zero-ohm	Test method
High-temperature exposure	1.0	Rmax≤50 mΩ	150℃, 1000 h, unpowered
Thermal shock	1.0	Rmax≤50 mΩ	-55℃ to 125℃, 1000 cycles
Damp heat, steady state	2.0	Rmax≤550 mΩ	85℃, RH85%, 10%UR (≤Umax), 1000 h
High-temperature life	2.0	Rmax≤50 mΩ	70℃, UR (≤Umax), 1000 h, 1.5 h on/0.5 h off
Shock	1.0	Rmax≤50 mΩ	Half-sine, 100 g, 6 ms, 3.75 m/s
High-frequency vibration	1.0	Rmax≤50 mΩ	10 to 2000 Hz, displacement amplitude 0.75 mm, 5 g, 12×3=36 times
Electrostatic discharge	3.0	Rmax≤50 mΩ	0603G: 0.5 kV; 1005/1608: 1 kV; 2012 and larger: 2 kV
Overload	1.0	Rmax≤50 mΩ	2.5UR (≤2Umax), 5 s
Substrate bending strength	1.0	Rmax≤50 mΩ	5025/6332: 2 mm; others: 3 mm; 60 s
Sulfur test	1.0	Rmax≤50 mΩ	105℃, damp-heat sulfur-powder vapour test (with saturated potassium nitrate), 750 h
Termination strength	No visible damage	No visible damage	0603G: 3 N; 1005: 10 N; 1608 and larger: 17.7 N; 60 s

Ordering Information

ARI1608S472F / ARI1608 50

Non-zero-ohm: model / TCR S±100 or U±250×10^-6/℃ / E24 or E96 nominal resistance / F±1%, G±2%, J±5%. Zero-ohm: model / space (no TCR mark) / 50 (maximum resistance 50 mΩ).