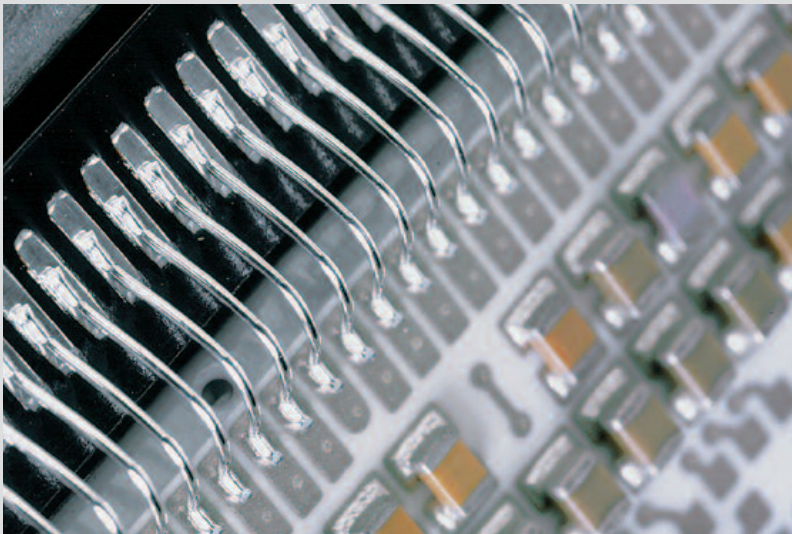


Al-R Aluminum Bonding Wire for Universal Use and High Quality



Pure and ultra-pure aluminum wires are specially suitable for the contacting of semiconductor components for high power ratings. The specified, high material purities and the smooth, clean wire surfaces result in good bondability. This material displays a high degree of corrosion resistance due to its special doping.

These wires are used for preference with a diameter $> 100 \mu\text{m}$.

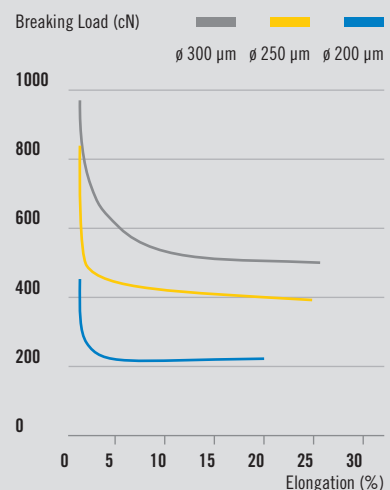
Areas of application

- Automotive components
- Power components
- Hybrid components
- Transistors / thyristors

Al-R Benefits

- High strength
- Good bending fatigue properties
- Excellent loop stability
- Outstanding bonding properties

Breaking Load vs. Elongation



Recommended Technical Data of Al-R

Diameter	Microns (μm)	125	150	175	200	250	300	375	400	450	500
	Mils	5	6	7	8	10	12	15	16	18	20
Elongation	%	> 5	> 5	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10
Breaking Load	cN	80 – 120	130 – 170	170 – 230	230 – 330	320 – 480	450 – 650	700 – 900	800 – 1000	1150 – 1450	1400 – 1800

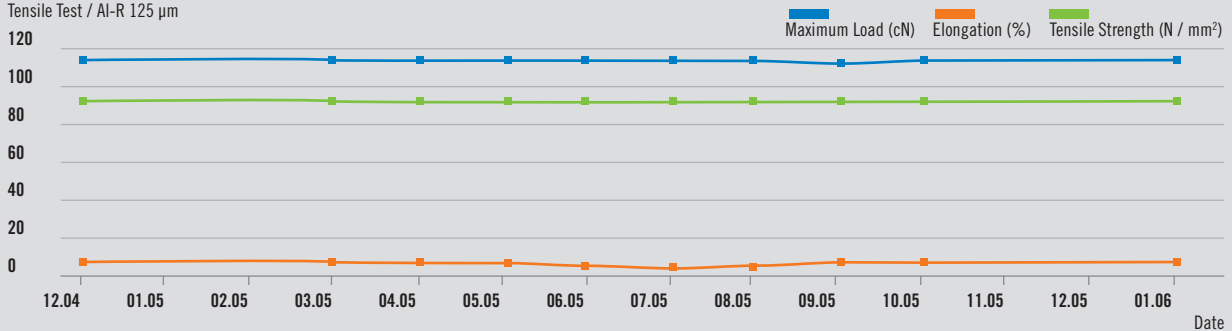
Characteristics of Al-R

Melting Point	°C	660
Modulus of rigidity	kN / mm ²	27
Thermal conductivity at 20°C	W / m-K	230
Linear expansion coefficient (20 – 30°C)	10-6-K-1	25.3
Electrical Resistivity at 20°C	μOhm-cm	2.8
Temperature coefficient of electrical resistance (0 – 100°C)	10-3-K-1	4.14
Relative electrical conductivity (IACS) at 20°C	%	61.6
Meter resistance at ø 25 μm (20°C)	Ω / m	57.1
Thermal emf against Cu (0°/100°C)	mV	-0.35



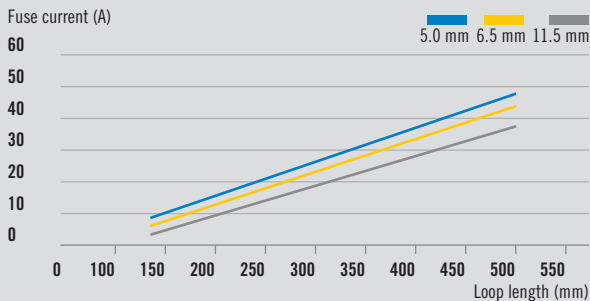
Aluminum Bonding Wire Long-time Behavior

Tensile Test / Al-R 125 μm



Fuse Currents of Al-R

Fuse current (A)



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