

### High power series - Automotive variant

Type: ALF

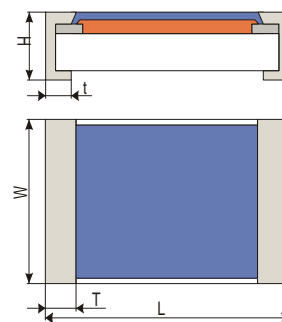
Sizes: 1210, 1218, 2010, 2512, 2040

#### Characteristics:

- Chip resistors in thick film technology
- Special layout for high electrical load
- Resistance area coated with glass and varnish passivation
- High stability and reliability
- AEC Q200 qualified
- Tight tolerances ( $\geq 0,5\%$ ) – low temperature coefficient ( $\geq 50\text{ppm/K}$ )
- RoHS-conform
- Customer specific barcodes available - also in 2D
- All sizes can be manufactured with the following contact variants  
   ⇒ Electroplated alloy resistant tinned

#### Dimensions (in mm):

Size	L Length		W Width		H Depth		t Contact back		T Contact Front	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
1210	3,00	3,30	2,35	2,65	0,50	0,75	0,35	0,85	0,25	0,85
1218	3,00	3,30	4,50	4,80	0,50	0,75	0,35	0,85	0,25	0,85
2010	4,80	5,20	2,30	2,70	0,50	0,75	0,35	0,85	0,25	0,85
2512	6,10	6,50	3,00	3,30	0,50	0,75	0,35	0,85	0,25	0,85
2040	4,90	5,30	10,05	10,35	0,50	0,75	0,35	0,85	0,25	0,85



#### Packaging units:

Reel Ø	Card tape acc. EN 60286-3	Blister tape
180 mm	5 T pcs.	4 T pcs.
330 mm	10 T pcs. 20 T pcs.	8 T pcs. 16 T pcs.
Samples possible up to 50 pcs./value		

#### Ordering information:

ALF	- N	1210	100k	1%	100ppm/K	K	P	5 (optional)
Type	Contact	Size	R- Value	$\pm$ Tolerance	$\pm$ TCR	Marking	Packaging	pcs. / Reel (T pcs.)
ALF	Standard (without add.)	1210 to 2040	1R to 10M	0,5 1 5	50 100	K- only with	P- Card tape B- Blister tape S- Bulk	Depends on size and packaging unit

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**Technical data – depending on size:**

Size	Nominal voltage $U_{max}$ (V)	Load $P_{70}$ (W)	R-Range	R-Tolerance (± %)	TCR (± ppm/K)	Packaging		
						P	B	S
1210	200	0,50	1R - 10M	0,5 / 1 / 5	50 / 100	x		x
1218	200	1,00	1R - 10M	0,5 / 1 / 5	50 / 100		x	x
2010	300	0,50	1R - 10M	0,5 / 1 / 5	50 / 100		x	x
2512	500	1,00	1R - 10M	0,5 / 1 / 5	50 / 100		x	x
2040	250	2,00	1R - 10M	1 / 5	50 / 100		x	x

**Technical data - general:**

Technical data	
Operating temperature range	-55°C ... +155°C
Climatic category acc. EN 60068	55 / 155 / 56
Solderability acc. EN 60068-2-58	245°C 3s
Soldering heat resistance acc. EN 60068-2-58	±( 0,5% + 0,05R ) at 260°C 10s
Long time stability	
Storage 155°C / 1000h	±( 1,0% + 0,05R )
Endurance $P_{70}$ / 70°C / 1000h	±( 0,5% + 0,05R )
Damp heat, steady state (56d / 40°C / 96%)	± ( 1,0% + 0,05R )
Biased humidity (1000h / 85°C / 85%)	± (2% +0,05R)

Data, unless specified, acc. EN 140401-802.