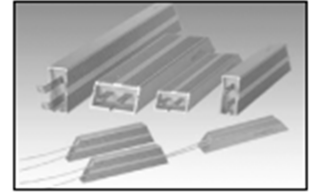


ARH/ARV (Metal Clad Wire Wound Resistors for Automobile)

The ARV(V=Vertical type) & ARH(H= Horizontal type) models are wire wound, metal-clad resistors for EV(Electric Vehicle), HEV(Hybrid Electric Vehicle), PHEV(Plug-in Hybrid Electric Vehicle) . These models have an extruded aluminium housing providing strong and rugged protection. These models controls inrush current through PRA(Power Relay Assembly) Option includes special leads for automobile.



GENERAL SPECIFICATION

Model	Rated Power [W]		*Resistance Range[Ω]		Resistance Tolerance [%]
	On Heatsink	In Free Air	Inductive	Non-Inductive	
			Flying Leads	Flying Leads	
ARV/ARH 60	60	50	0.2 ~ 400	0.2 ~ 180	D [±0.5%] F [±1.0%] G [±2.0%] J [±5.0%] K [±10%]
ARV/ARH 80	80	64	0.2 ~ 910	0.2 ~ 110	
ARV/ARH 100	100	80	0.2 ~ 1.1K	0.2 ~ 240	
ARV/ARH 120	120	96	0.2 ~ 1.3K	0.2 ~ 300	
ARV/ARH 150	150	120	0.2 ~ 1.6K	0.2 ~ 390	
ARV/ARH 200	200	140	0.4 ~ 2.2K	0.4 ~ 1.0K	
ARV/ARH 300	300	210	0.4 ~ 2.7K	0.4 ~ 1.5K	
ARV/ARH 400	400	240	0.4 ~ 4.3K	0.4 ~ 2.2K	
ARV/ARH 500	500	300	0.4 ~ 6.8K	0.4 ~ 3.0K	

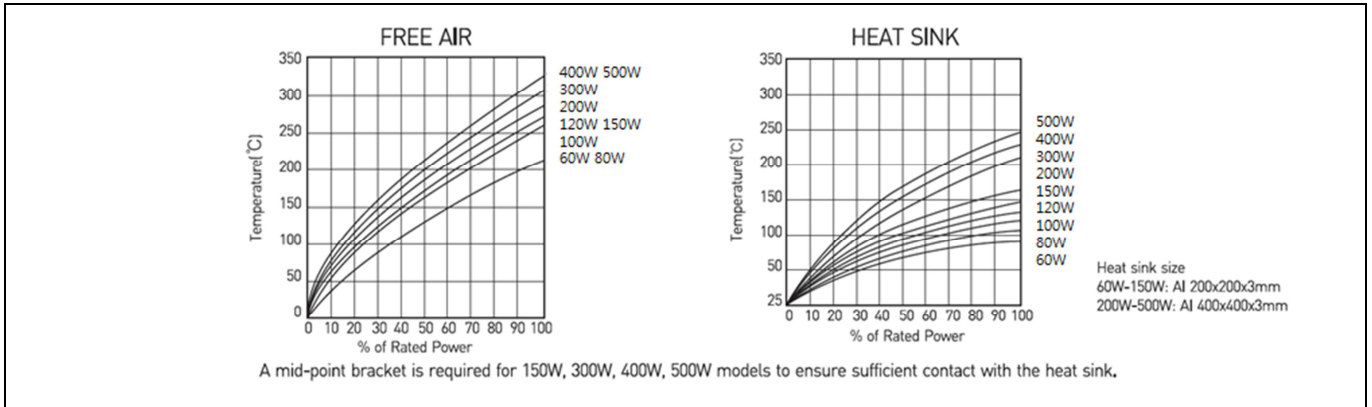
*Also available in extended ohmic ranges

CHARACTERISTICS

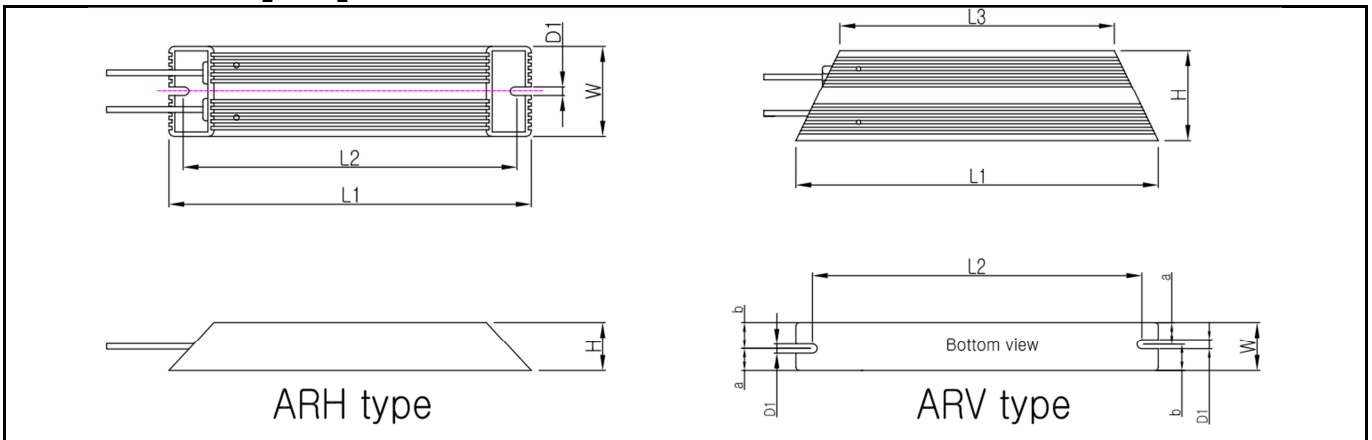
Values in [] mean Change in Ω After Test

Temperature Range			-55 ℃ ~ +200 ℃						
Insulation Resistance			Min. 20MΩ						
Dielectric Withstanding Voltage			(Option) AC1500V, 3500V For 1 Min (Max. Leakage Current 2mA)						
Temperature Coefficient			Max ±260ppm / ℃ (+25 ℃ and +120 ℃)						
Short Time Overload	±[2%+0.05]		5 or 10 X Power rating , 5 Seconds						
Moisture Resistance	±[3%+0.05]		40 ℃ / RH95% 500Hours, DC100V Case to terminal						
Thermal Shock	±[2%+0.05]		Power Rating 30min, -25 ℃ 15Min						
Vibration	±[1%+0.05]		10Hz ~55Hz 10Hz, 1min, 2Hours each direction)						
Vibration with thermal condition	±[5%±0.05]	Thermal condition	-40 ℃ to +85 ℃ (-40 ℃ 10min, +85 ℃ 10min)						
		Vibration condition	Vibration condition [Hz]	10	55	180	300	360	1000
			Spectrum [(m/s ₂) ₂ /Hz = G ₂ /Hz]	9.9	3.2	0.12	0.12	0.06	0.06
		41 hrs each directions							
Moisture Load Life	±[3%+0.05]		40 ℃ / RH 95% Power rating x 0.1 1.5 Hours On, 30min Off for 1000 hrs.						
	±[3%+0.05]		+65 ℃, +25 ℃, -10 ℃ / RH95% Power rating x 0.1 1.0 Hours On, 1.0 Hours On Off for 240 hrs.						
Load Life	±[5%+0.05]		Power Rating 1.5Hours On, 30Min Off, 1000 hrs.						
Operation Test	±[5%+0.05]	Successful	+85 ℃ , Rush Current Test, Specific Voltage, Capacitance, 1,000~15,000 Cycle						
		Failed test	+85 ℃ , Rush Current Test, Specific Voltage, Without Capacitance, 5~50Cycles						
		Low Temp	-40 ℃ , Rush Current Test, Specific Voltage, Capacitance, 3Hours						
Temp. Cycle	±[3%+0.05]		+85 ℃ 10min, -40 ℃ 10min 1cycle 60min , 207 Cycles						

SURFACE TEMPERATURE INCREASE VERSUS POWER LOAD



DIMENSIONS [mm]



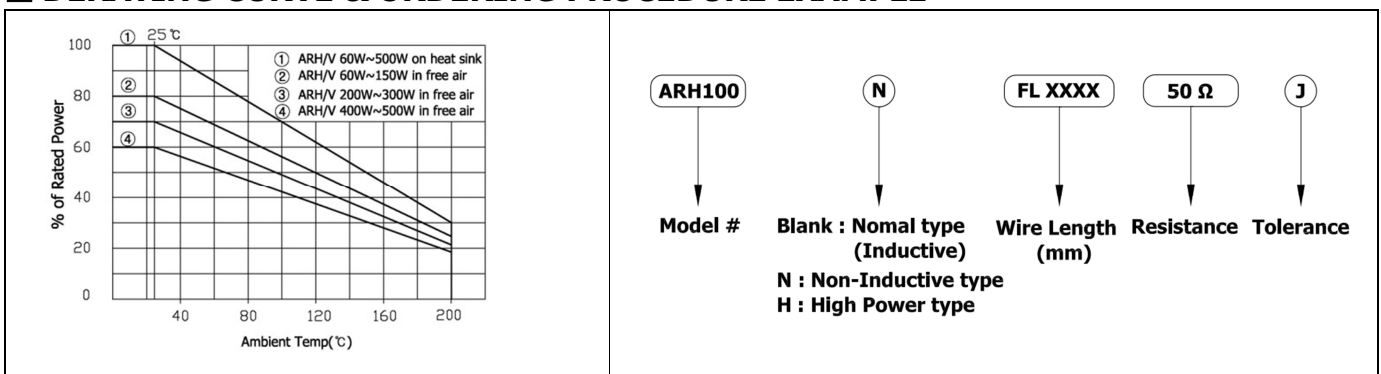
Model	Dimension [mm]								Weight [g]
	L1±2	L2±2	L3±2	W±0.5	H±0.5	D1±0.3	a±0.3	b±0.3	
ARV/ARH 60	100	87	60	41[H] 22[V]	22[H] 41[V]	4.3	10	12	111
ARV/ARH 80	150	137	110	41[H] 22[V]	22[H] 41[V]	4.3	10	12	190
ARV/ARH 100	165	152	125	41[H] 22[V]	22[H] 41[V]	4.3	10	12	215
ARV/ARH 120	182	169	142	41[H] 22[V]	22[H] 41[V]	4.3	10	12	243
ARV/ARH 150	210	197	170	41[H] 22[V]	22[H] 41[V]	4.3	10	12	285
ARV/ARH 200	165	146	125	60[H] 30[V]	30[H] 60[V]	5.3	13	17	460
ARV/ARH 300	215	196	175	60[H] 30[V]	30[H] 60[V]	5.3	13	17	600
ARV/ARH 400	265	246	225	60[H] 30[V]	30[H] 60[V]	5.3	13	17	775
ARV/ARH 500	335	316	295	60[H] 30[V]	30[H] 60[V]	5.3	13	17	985

FLYING LEADS

Model	* Cu-R4XLPO-HV (Orange) (Condition : ambient temp. 30 °C)	
	3sq	1sq
ARV/H 60 - 150	0.2 Ω ~ 0.99 Ω	1.0 Ω ~
ARV/H 200 - 500	0.4 Ω ~	-

* Generally, the flying leads is designated by the customer.

DERATING CURVE & ORDERING PROCEDURE EXAMPLE



ARH100 **N** **FL XXXX** **50 Ω** **J**
 ↓ ↓ ↓ ↓ ↓
Model # **Blank : Nomal type (Inductive)** **Wire Length (mm)** **Resistance** **Tolerance**
N : Non-Inductive type
H : High Power type



■ HIGH POWER TYPE SPECIFICATION [Preliminary version]

Model	*Rated Power [W]	Resistance Range[Ω]	Resistance Tolerance [%]
	*In Free Air	Inductive	
		Flying Leads	
ARV/ARH 100H	150	16 ~ 1.2kΩ	D [±0.5%] F [±1.0%] G [±2.0%] J [±5.0%] K [±10%]
ARV/ARH 120H	170	20 ~ 1.5kΩ	
ARV/ARH 200H	250	45 ~ 2.7kΩ	

*Max Surface Temp. 380℃

■ CHARACTERISTICS

Values in [] mean Change in Ω After Test

*Load Life	±[5%+0.05]		Power Rating 100 Hours On.
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- Other characteristics are same as Standards.