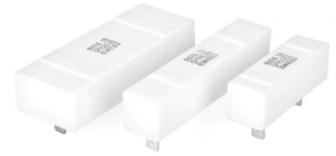


# AQL (Ceramic encased Wire Wound Resistors for Automobile)

The AQL models are wire wound, Ceramic encased resistors for Vehicle, EV(Electric Vehicle), HEV(Hybrid Electric Vehicle), PHEV(Plug-in Hybrid Electric Vehicle) . These models controls inrush current through PRA(Power Relay Assembly)



## GENERAL SPECIFICATIONS

Model	Rated Power [W]	*Resistance Range[Ω]	Tolerance [%]
	Forced cooling	Inductive	
AQL20S	20	20 ~ 80	J[±5%]
AQL20	20	20 ~ 80	
AQL30	30	20 ~ 80	
AQL40	40	20 ~ 80	
AQL50	50	20 ~ 80	
AQL60	60	20 ~ 80	
AQL80	80	20 ~ 80	
AQL100	100	20 ~ 80	

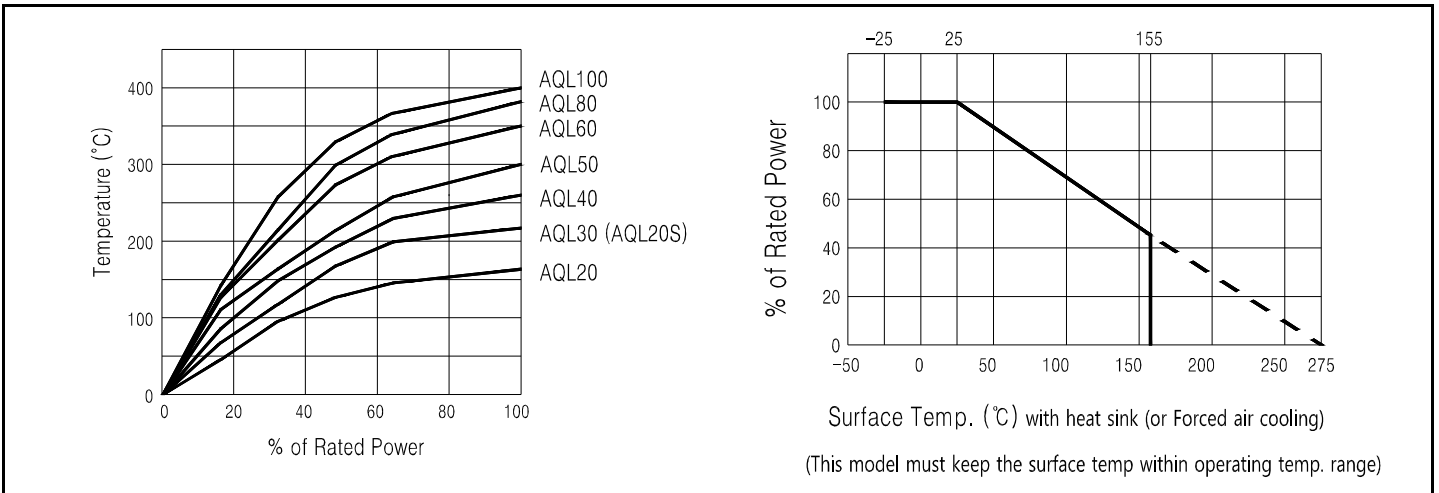
\* Also available in extended ohmic ranges

## CHARACTERISTICS

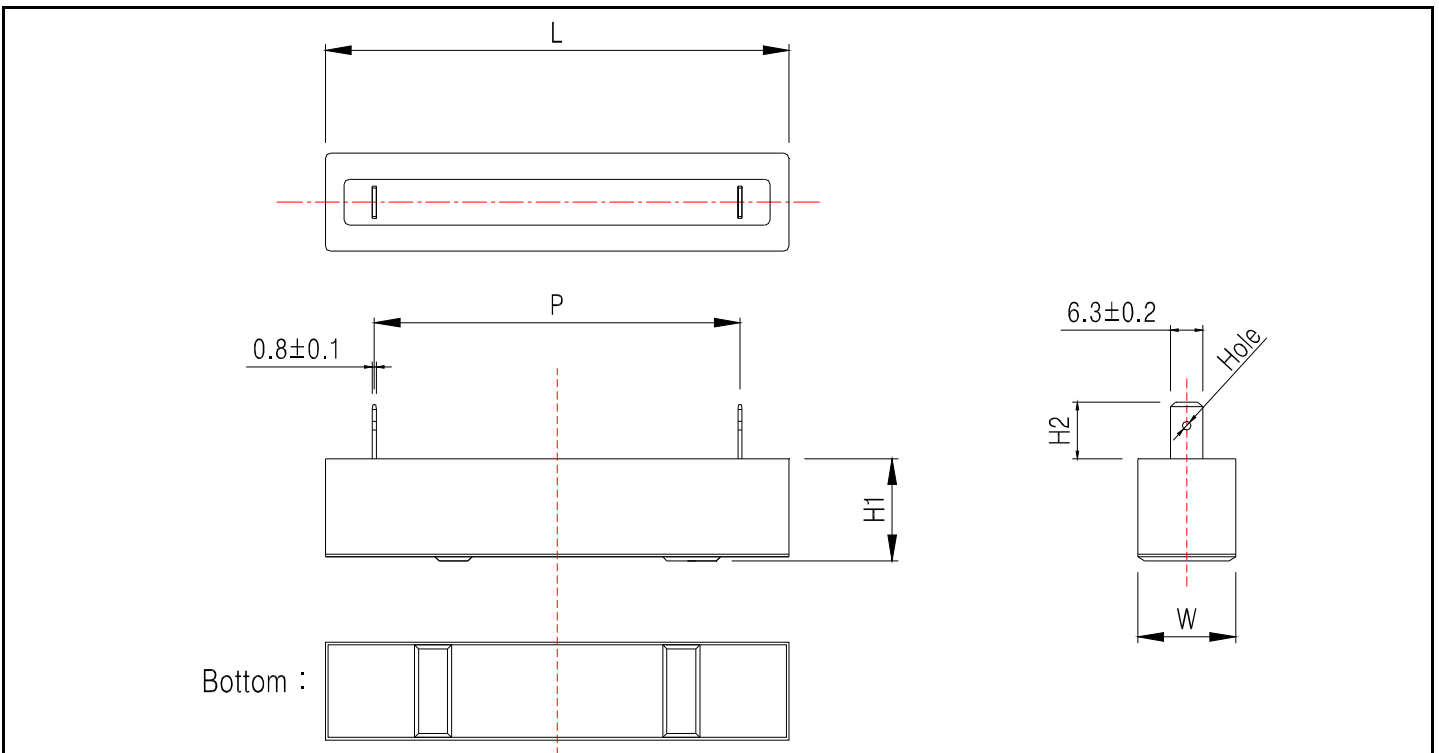
Values in [] mean Change in Ω After Test

Test	Condition		
Temperature Range	- 55 ~ +155°C		
Insulation Resistance	20MΩ minimum		
Dielectric Strength	AC1500V for 1min (Max leakage current : 2mA)		
Temperature Coefficient	Max ± 260ppm/°C		
Short Time Overload	±[2%+0.05Ω]	5 ~ 10 X Power rating, 5 sec	
Moisture Resistance	±[3%+0.05Ω]	40°C / RH95% 500 Hours, DC100V Case to Terminal	
Thermal Shock	±[3%+0.05Ω]	Power Rating 30min, -25°C 15Min	
Vibration Condition & Mechanical Shock	±[3%+0.05Ω]	Vibration Condition	(10~2000)Hz 5g, 1 cycle / 20Min (12 Cycle)
		Mechanical Shock	±100G, 6ms, Half sine (5 Cycle)
Moisture Load Life	±[3%+0.05Ω]	40°C / RH95% Power Rating x 0.1, 1.5 Hours On, 0.5 Hours Off for 1000 Hours +65°C, +25°C, -10°C / RH95% power rating x 0.1, 1.0 Hours On, 1.0 Hours Off for 2500 Hours	
Load Life	±[3%+0.05Ω]	Power rating 1.5 Hours on, 30 min Off 1000 Hours	
Operations Test	±[3%+0.05Ω]	Successful	+85, Rush Current test, Specific Voltage, Capacitance 1,000 ~ 15000 Cycle
		Failed Test	+85, Rush Current test, Specific Voltage, Without capacitance, 5 ~ 50 Cycle
		Low Temp	-40°C, Rush Current test, Specific Voltage, Capacitance, 3 Hours
Temp. Cycle	±[3%+0.05Ω]	+85°C 10min, -40°C 10min cycle 60min, 207 Cycle	

**SURFACE TEMPERATURE INCREASE VERSUS POWER LOAD & DERATING CURVE**



**DIMENSIONS[mm]**



Model	L	P	W	H1	H2	Holes
AQL20S	63 ± 2.5	47 ± 2.5	13.5 ± 1.5	12.5 ± 1.5	9 ± 2.0	1.65 ± 0.2
AQL20	60 ± 2.5	36.2 ± 2.5	19 ± 1.5	19.8 ± 1.5	11 ± 2.0	1.65 ± 0.2
AQL30	75 ± 2.5	46.2 ± 2.5	19 ± 1.5	19.8 ± 1.5	11 ± 2.0	1.65 ± 0.2
AQL40/50/60	90 ± 2.5	71 ± 2.5	19 ± 1.5	19.8 ± 1.5	11 ± 2.0	1.65 ± 0.2
AQL80	113 ± 2.5	89 ± 2.5	22 ± 1.5	22 ± 1.5	11 ± 2.0	1.65 ± 0.2
AQL100	113 ± 2.5	89 ± 2.5	22 ± 1.5	22 ± 1.5	11 ± 2.0	1.65 ± 0.2