

# Metal Clad Wire Wound Resistors



- Aluminum housed
- Standard(RH) or non-inductive(RH-N) winding
- Cement molding
- 100% RoHS compliant
- Complete welded construction
- Mounts on chassis to utilize heat sink effect
- High stability at conventional power ratings

## GENERAL SPECIFICATIONS

Model	Element Type	Power Rating		Resistance Range		Temperature Coefficient					Resistance Tolerance (%)	Minimum Ohmic Value
		With Heat Sink	In Free Air	Inductive	Non-Inductive	-15°C, 25°C, 105°C	Measuring Temp; -55°C, 25°C, 250°C					
						±200 [ppm/°C]	±200 [ppm/°C]	±100 [ppm/°C]	±50 [ppm/°C]	* ±40 [ppm/°C]		
RH 25C	Wire Wound	20W	8W	0.27Ω~25KΩ	0.1Ω~10KΩ	-	-	0.1Ω~0.976Ω	1Ω~19.6Ω	20Ω~	B [±0.1] C [±0.25] D [±0.5]	1Ω~0.4Ω~0.2Ω~
RH 50C	Wire Wound	*30W *50W	10W	0.68Ω~50KΩ	0.2Ω~20KΩ	-	-	0.2Ω~0.976Ω	1Ω~19.6Ω	20Ω~	F [±1] G [±2] J [±5]	0.1Ω~0.05Ω~0.02Ω~
FRH 25C	Thick Film	15W	5W	-	1KΩ~2MΩ	1KΩ~2MΩ	-	-	-	-	F [±1] G [±2] J [±5]	1KΩ~
FRH 50C	Thick Film	25W	8W	-	1KΩ~2MΩ	1KΩ~2MΩ	-	-	-	-	K [±10]	

\*30W on heat sink(178×127×51×1mm), 50W on heat sink(305×305×2mm)

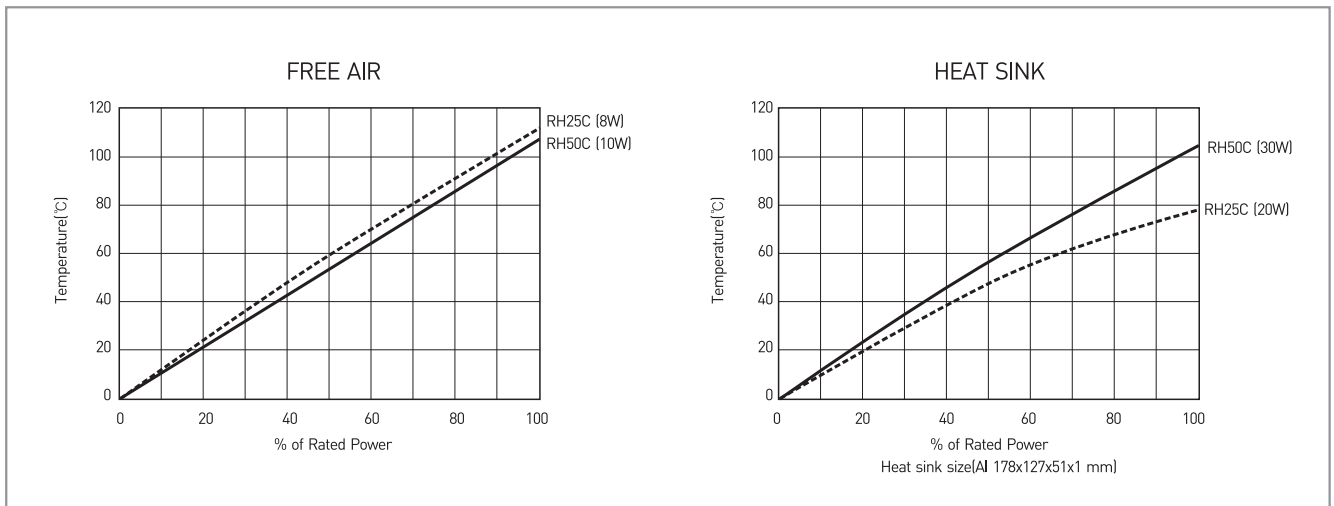
\* Option : ±20ppm/°C is available

## CHARACTERISTICS

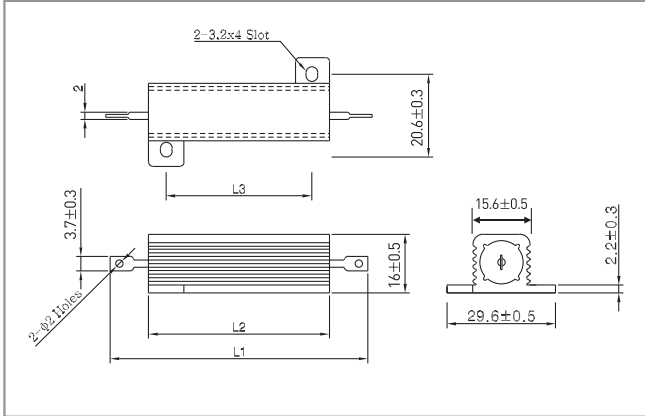
Values in [ ] mean change in Ω after test

Test	RH	FRH	Condition
Temperature Range			-55°C ~ +250°C
Insulation Resistance			20MΩ minimum
Dielectric Withstanding Voltage	±[0.2%+0.05Ω]	±[0.5%+0.05Ω]	Standard: AC 1500V for 1minute; Max. leakage current: 2mA Option: AC2000V for 1minute
Short Time Overload	±[0.5%+0.05Ω]	±[1%+0.05Ω]	FRH: 2×Power rating 5 seconds, RH: 5×Power rating 5 seconds
Load Life	~30W: ±[1%+0.05Ω] 50W: ±[3%+0.05Ω]	±[2%+0.05Ω]	Power rating 1.5 hours on, 30 minutes off, 1000 hours
Thermal Shock	±[0.5%+0.05Ω]	±[1%+0.05Ω]	Power rating 30 minutes, -55°C, 15~30 minutes

## SURFACE TEMPERATURE INCREASE VERSUS POWER LOAD

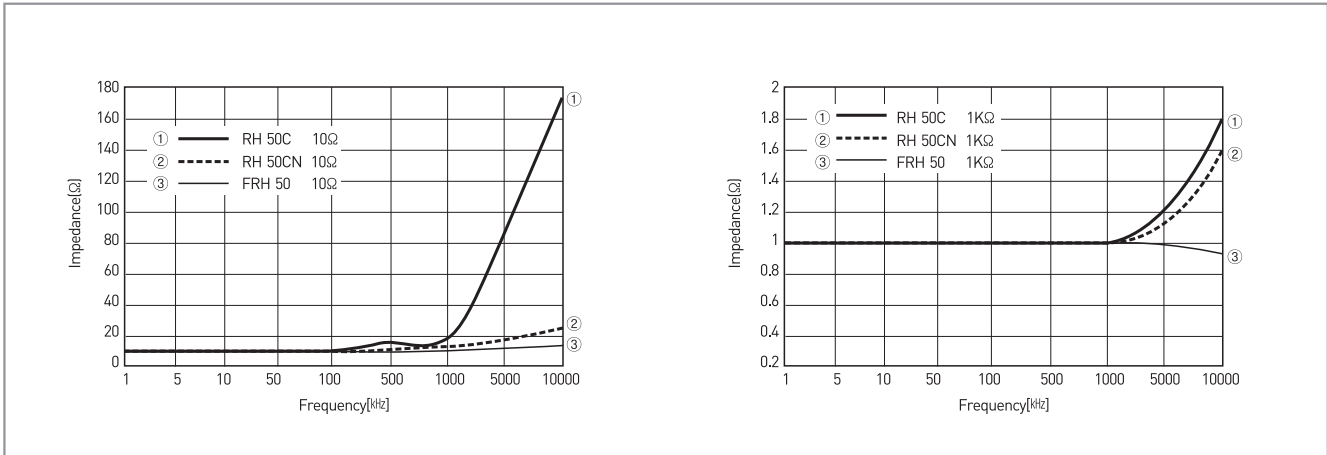


## DIMENSIONS [mm]



Model	Dimensions(mm)			Weight [g]
	L1±1.5	L2±0.5	L3±0.3	
RH 25C	49.4	27.1	18.3	16.5
RH 50C	70.8	49.3	39.7	35
FRH 25C	49.4	27.1	18.3	16.5
FRH 50C	70.8	49.3	39.7	35

## FREQUENCY CHARACTERISTIC CURVES



## DERATING CURVES

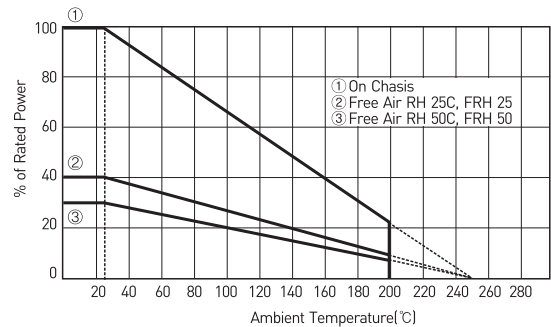
RH25, 50C and FRH resistors have an operating temperature range of -55°C to 250°C.

Derating is required for reduced chassis mounting area and for high ambient temperatures.

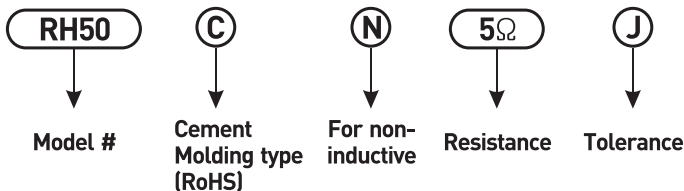
The following curves apply to operation of unmounted resistors.

Heat sink size: 178 × 127 × 51 × 1mm  
305 × 305 × 2mm (RH50C, 50W)

1. On Chassis
2. Free Air RH 25C, FRH 25C
3. Free Air RH 50C, FRH 50C



## ORDERING PROCEDURE EXAMPLE



If you require more detailed technical information please contact the RARA design team.  
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