Film Resistor
MResist Ultra MREU30

The development of our **MRes Ultra Resistor** is based on the well-known good tonal properties of copper-manganin foil. Compared to all wound-wire resistors, this film provides an order of magnitude lower inductance. Copper is significantly softer than the metal-oxide used for MOX resistors. The natural resonances of the copper-manganin foil are therefore significantly less pronounced, which means that distortions caused by crystallurgy and electroacoustics are significantly reduced here. That is why resistors of this design have secured a top position among audio components in recent years: They lack many of the distortions inherent in other resistor designs.

General Information:

Metal foil resistor

Resistances from 0.01Ohm to 47Ohm

Power rating:

5Watt without heat sink

15Watt with heat sink MREU30-COOL.RD (optionally)

30Watt with larger sized heat sinks

Resistance tolerances to ±1%

TCR to ±50ppm/K

TO-218 (TO-247) housing

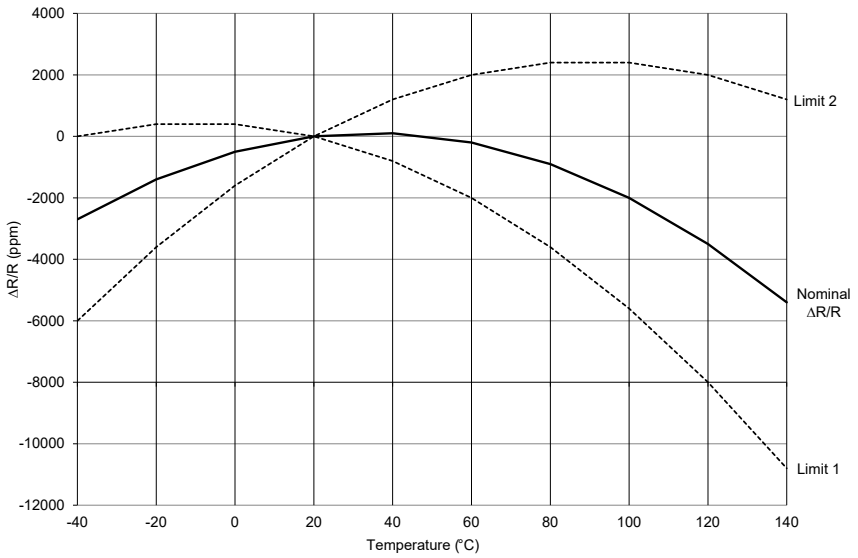
In cooperation with a company specialized on high-quality laboratory resistances, the most acoustically balanced one was determined for the **MRes Ultra** among a large number of film and foil resistors as the basis for further development. In a further, very extensive development cycle, the micro-mechanical distortions generated by the feedback of electro-mechanical vibrations and microphony were minimized. For this purpose, the mechanical structure of the resistor was damped, among other things, by using heavier and more sluggish copper instead of aluminum as the carrier plate. A whole range of adhesives and insulation materials have been tested from a micro-acoustic point of view and optimized in their interaction, so that the total micro-electroacoustic distortion of the **MResUltra** is significantly below the level of other resistances available on the market.

As a result, fewer music details are lost in the electro-mechanical vibrations of the electrical signal, hence the very instrument's and human voices' properties as well as their life like staging are present in an up-to-date unknown cleaness.

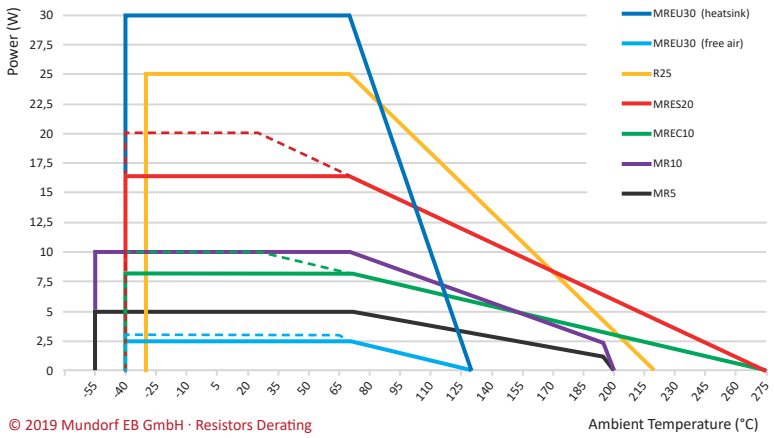
Specifications

Resistance Range:		0,01 to 47 OHM
Power Rating:	without heatsink, Ambient temperature 65°C with heatsink MREU30-COOL.RD	3 W 15 W
Tolerance:		1%
Thermal Resistance:		2,5 K/W
Voltage Proof:		300 VDC / OPTION AC: 500 VAC
Temperature coefficient 20°C to 60°C	R ≤ 0R010	± 50 (PPM/K)
Thermal EMF:		< 0,1 µV/K
Operating Temperature Range:		- 40°C to 130°C
Resistor Material:		CuNiMn-Foil
Substrate:		Copper
Housing:		PPS
Connector Material:		Cu / tinned
Terminals:		2
Max. Torque:		1 Nm

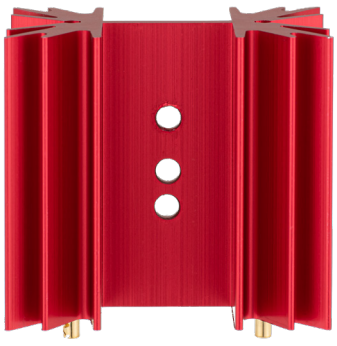
Temperature Coefficient



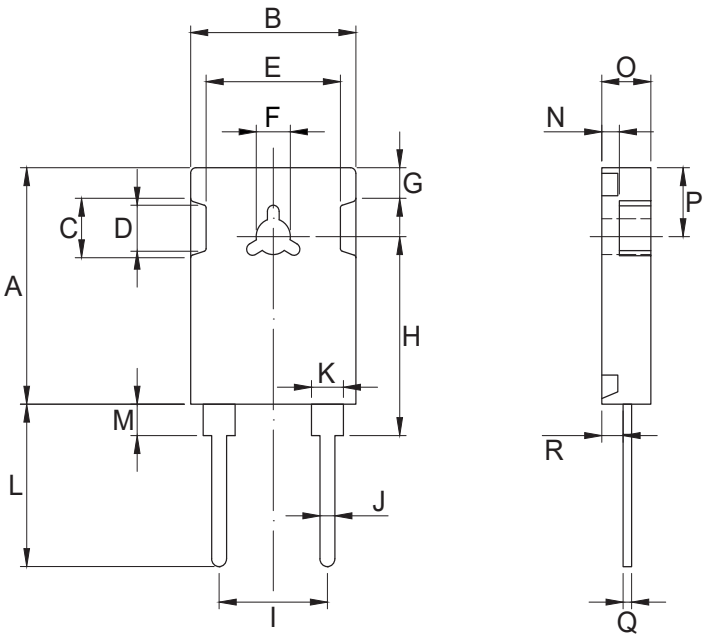
The diagram below shows the temperature derating of our different resistor types from 70°C (dashed: additional manufacturer specifications) as well as the minimum application temperature.



Film Resistor	Heatsink	Mounting
MResist Ultra MREU30	MREU30-COOL.RD	

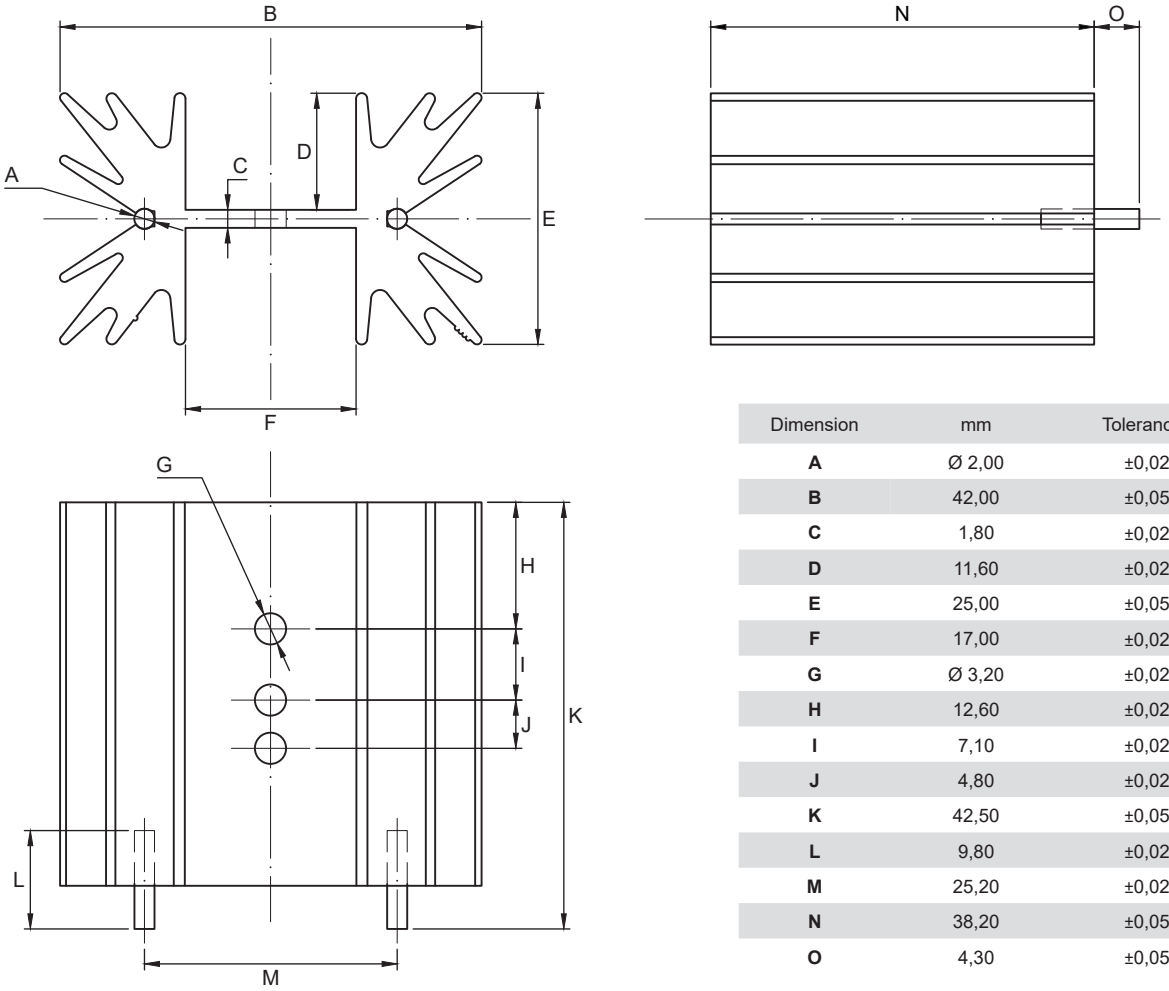


MREU Dimensions



Dimension	mm	Tolerances
A	21,10	±0,2
B	15,50	±0,2
C	4,90	±0,1
D	4,00	±0,1
E	12,60	±0,2
F	Ø 3,20	±0,1
G	2,95	±0,1
H	17,72	±0,2
I	10,16	±0,2
J	1,40	±0,1
K	3,00	±0,1
L	14,50	±0,2
M	2,80	±0,1
N	1,65	±0,1
O	4,60	±0,1
P	6,15	±0,2
Q	0,80	±0,1
R	2,00	±0,1

Heatsink Dimensions



Dimension	mm	Tolerances
A	Ø 2,00	±0,02
B	42,00	±0,05
C	1,80	±0,02
D	11,60	±0,02
E	25,00	±0,05
F	17,00	±0,02
G	Ø 3,20	±0,02
H	12,60	±0,02
I	7,10	±0,02
J	4,80	±0,02
K	42,50	±0,05
L	9,80	±0,02
M	25,20	±0,02
N	38,20	±0,05
O	4,30	±0,05