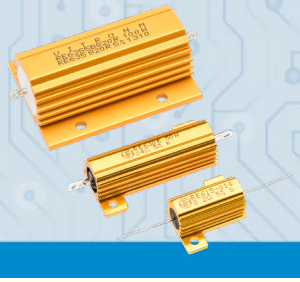


VITROHM
a YAGEO company

REA Series Datasheet

Wirewound Resistors | Aluminium Housing | Chassis Mount

ORDERING CODE - Example

New SAP Part Nr.:

REA	50A	J	B	-	AX-	100R	AA
Serie	Power rating	Tol.	Pack-Code	TCR	Forming type	R Value	Special
		C = ±0,25% **D** = ±0,5% **F** = ±1% **J** = ±5% **K** = ±10%	**B** = (Bulk)	- Base on spec.	**AX-** = Axial		**AA** = Standard **N1** = Non Inductive

Historical VTM Part Nr.:

RE630	5	B	100R
Type	Tol.	Pack-Code	R Value

APPLICATIONS

Power & Energy

Industrial

FEATURES

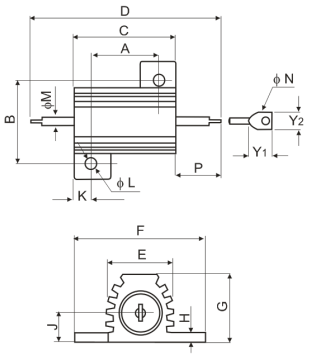
- Non-inductive style available (affix N)
- Aluminium housing with excellent heat dissipation
- Mount on chassis to utilize heat-sink effect
- Excellent ration power vs dimensions
- Excellent stability in operation
- RoHs and REACH Compliant

ELECTRICAL SPECIFICATIONS

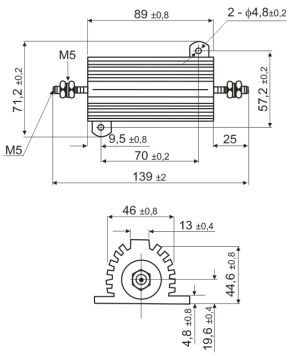
Type		REA750	REA750	REA13A	REA13A	REA25A	REA25A	REA50A	REA50A	REA10B	REA10B	REA25B	REA25B
Historical Part Number		RE605	RE605N	RE610	RE610N	RE615	RE615N	RE630	RE630N	RE640	RE640N	RE650	RE650N
Nominal Power Rating P_{25}	[W]	7,5	7,5	12,5	12,5	25,0	25,0	50,0	50,0	100,0	100,0	250,0	250,0
Resistance Range (Other values upon request)	[Ω] Min.	R1	R1	R1	R1	R1	R1	R2	R5	1R	1R	1R	1R
	[Ω] Max.	3K3	750R	5K6	1K	9K	3K	15K	4K	20K	6K	30K	8K
E-Series (preferred)		E24 (Other upon request)											
Tolerances	±[%]	0,25 = C ; 0,5 = D ; 1 = F ; 5 = J ; 10 = K											
Temperature Coefficient	$\pm[10^{-6}*K^{-1}]$	Depends on the value, please check the table below											
Working Temperature Range	[ºC]	-55 ... +250											
Insulation Resistance IEC60115-1 clause 4.6	[MΩ]	$> 10^4$											
Max. Working Voltage	$[V]_{RMS}$	$\sqrt{P_{70} \times R}$											
Dielectric Withstanding Voltage IEC115-1 clause 4.7 (1[min])	$[V]_{RMS}$	1000						2000		4500			

DIMENSIONS [mm]

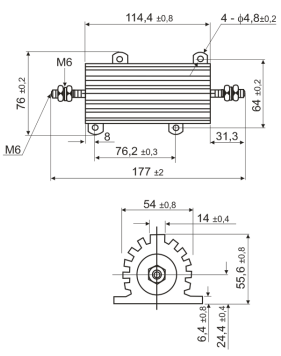
Type: REA750...REA50A



Type: REA10B



Type: REA25B



Type	*Historical P/N:*	A ±0,1	B ±0,1	C ±0,5	D ±1,5	E ±0,4	F ±0,1	G ±0,4	H ±0,2	J ±0,2	K ±0,2	L ±0,1	M ±0,02	P ±0,1	N ±0,1	Y1	Y2
REA750	RE605	11,2	12,5	15,2	28,6	8,5	16,4	8,1	1,7	3,8	2,0	2,4	1,5	6,7	1,3	------	------
REA13A	RE610	14,2	15,9	19,0	34,9	10,7	20,3	9,9	1,9	4,2	2,4	2,4	2,0	7,95	2,2	------	------
REA25A	RE615	18,2	19,8	27,0	49,2	14,0	27,4	13,9	1,9	5,9	4,4	3,2	2,0	11,1	2,2	------	------
REA50A	RE630	40,0	21,4	50,0	70,6	16,0	29,0	15,5	2,2	6,6	5,0	3,2	2,0	10,3	2,2	8,0	4,0

File Nr. 2661.18-450.101.02 | Revision: 202010

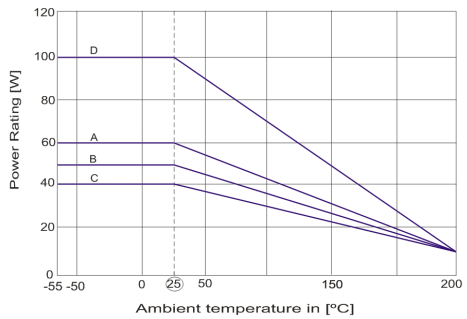
REA Series Datasheet

PERFORMANCE DATA

Type		REA750	REA750	REA13A	REA13A	REA25A	REA25A	REA50A	REA50A	REA10B	REA10B	REA25B	REA25B
Historical Part Number		RE605	RE605N	RE610	RE610N	RE615	RE615N	RE630	RE630N	RE640	RE640N	RE650	RE650N
Derating Linear	[ºC]	70…250 (0W)											
Climatic Category		55/200/56											
Failure Rate *(Total, ϑ_0, max, 60[%] cont. lev.)*	[10^{-9} h^{-1}]	appr. 100 depends on value											
Short Time Overload *IEC60115-1 clause 4.13* *(U=10* $\sqrt{P_{70} \times R}$, 5[s])*	±[%]	1,0											
Endurance *IEC60115-1 clause 4.25* *(P_{70} @ 70[°C], 1000[h])*	±[%]	5,0											
Damp Heat, Steady State *IEC60115-1 clause 4.24* *(40[°C], 93[% r.h.], 56[d])*	±[%]	5,0											
Climatic Sequence *IEC60115-1 clause 4.23*	±[%]	2,0											
Resistance to Soldering Heat *IEC60115-1 clause 4.18* *($260^{\pm5}$[°C], $3{,}5^{\pm1}$[s])*	±[%]	0,5											
Terminal Strength	±[%]	0,5											
Terminal Tensile Strength	[N]	50											
Solderability *IEC60068-2-20* *($245^{\pm5}$[ºC] $3^{\pm0,5}$[s])*		Solder bath method (> 95% coverage)											
Marking *IEC60062*		Printed in clear											

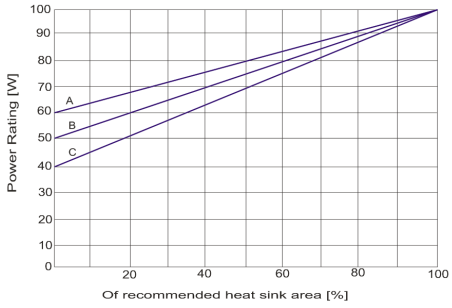
PERFORMANCE GRAPHS

POWER DERATING



A:	REA750 ; REA13A	without heat sink
B:	REA25A	
C:	REA50A ; REA10B ; REA25B	
D:	All types mounted to recommended aluminum heat sink.	

POWER OF HEAT SINK



Reduced heat sink derating

Derating is also required when recommended heat sink area is reduced

A:	REA750 ; REA13A
B:	REA25A
C:	REA50A ; REA10B ; REA25B

Power Rating

REA resistor wattage ratings are based on mounting to the following heat sink:

Type	*Historical P/N:*	
REA750 ; REA13A	RE605; RE610	102x152x51x1mm (832cm^2)
REA25A	RE615	127x178x51x1mm (1077cm^2)
REA50A	RE630	305x305x1.5mm (1877cm^2)
REA10B ; REA25B	RE640; RE650	305x305x3.2mm (1896cm^2)

File Nr. 2661.18-450.101.02 | Revision: 202010

REA Series Datasheet

ELECTRICAL CHARACTERISTICS

Resistance Range

Type	*Historical P/N:*	±0,25[%]	±0,5[%]	±1, ±5, ±10[%]
REA750…AA	RE605	R5 … 1K2	R1 … 1K2	R1 … 3K3
REA750…N1	RE605N	R5 … 300R	R5 … 500R	R1 … 750R
REA13A…AA	RE610	R5 … 2K7	R5 … 2K7	R1 … 5K6
REA13A…N1	RE610N	R5 … 700R	R5 … 900R	R1 … 1K
REA25A…AA	RE615	R5 … 3K9	R5 … 3K9	R1 … 9K
REA25A…N1	RE615N	R5 … 1K5	R5 … 2K	R1 … 3K
REA50A…AA	RE630	R5 … 5K6	R5 … 5K6	R2 … 15K
REA50A…N1	RE630N	1R … 2K7	1R … 3K	R5 … 4K
REA10B…AA	RE640	3R … 12K	3R … 15K	1R … 20K
REA10B…N1	RE640N	3R … 4K7	3R … 5K1	1R … 6K
REA25B…AA	RE650	5R … 27K	5R … 27K	1R … 30K
REA25B…N1	RE650N	5R … 6K8	5R … 7K	1R … 8K

Rated Power P_{25} [W]

Type	*Historical P/N:*	MIL-PR type	Civil	Military
REA750…AA	RE605	RE60G	7,5 (5)	5
REA750…N1	RE605N	RE60N	7,5 (5)	5
REA13A…AA	RE610	RE65G	12,5 (10)	10
REA13A…N1	RE610N	RE65N	12,5 (10)	10
REA25A…AA	RE615	RE70G	25	20
REA25A…N1	RE615N	RE70N	25	20
REA50A…AA	RE630	RE75G	50	30
REA50A…N1	RE630N	RE75N	50	30
REA10B…AA	RE640	RE77G	100	75
REA10B…N1	RE640N	RE77N	100	75
REA25B…AA	RE650	RE80G	250	120
REA25B…N1	RE650N	RE80N	250	120

NOTE: Figures in parentheses on REA750 and REA13A indicate wattage printed on parts, new construction allows these resistors to be rated at higher wattage

Temperature Coefficient

Range	ppm/ºC
R1 … R99	± 100
1R … 9R9	± 50
≥ 10R	± 20

PACKAGING

The standard packaging for REA in axial type is bulk, dimensions below.

Type	*Historical P/N:*	*Pack Code*	*Pieces*
REA750	RE605	B = Bulk	280
REA13A	RE610		160
REA25A	RE615		60
REA50A	RE630		30
REA10B	RE640		1
REA25B	RE650		1