

KHS Series Datasheet

Power Wirewound Resistor | Axial | Fiber glass core | ceramic case

ORDERING CODE - Example

New SAP Part Nr.:

KHS	500	K	B	-	AX-	150R	AA
Serie	Power rating	Tol.	Pack-Code	TCR	Forming type	R Value	Special
		J = ±5% K = ±10%	B = Bulk R = Tape Reel	- Base on spec.	AX- = Axial 83- Inner Taping dimension		AA = Standard

Historical VTM Part Nr.:

KH208 - 8	5	B	150R
Type	Tol.	Pack-Code	R Value
	J = ±5% K = ±10%	B = Bulk R = Tape Reel	

APPLICATIONS



Industrial



Power & Energy

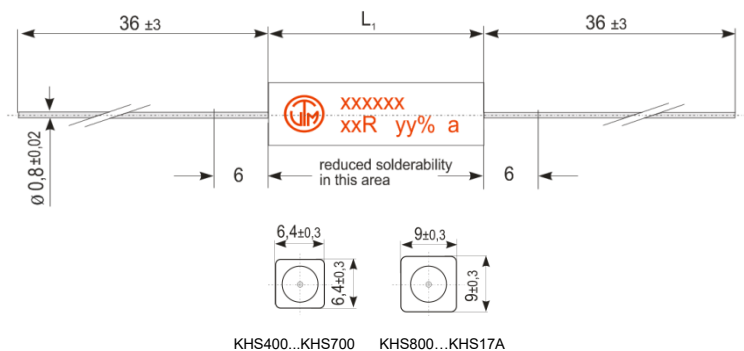
FEATURES

Pulse version available
preforming ; Other preforming available
RoHs Compliant

ELECTRICAL SPECIFICATIONS

Type		KHS400	KHS500	KHS700	KHS800	KHS10A	KHS11A	KHS17A
Historical Part Number		KH206-8	KH208-8	KH210-8	KH212-8	KH214-8	KH216-8	KH218-8
Nominal Power Rating P_{70}	[W]	4	5	7	8	10	11	17
Resistance Range	Min. [Ω] Max.	Please check the table below 12K 15K 33K 15K 33K 47K 82K (Other values upon request)						
E-Series (preferred)		E24 = 5% ; E12 = 10% (Other upon request)						
Tolerances	±[%]	J = 5% ; K = 10%						
Temperature Coefficient	±[10 ⁻⁶ K ⁻¹]	Depends on the value, please check the table below						
Working Temperature Range	[°C]	-55 ... +350						
Thermal Resistance	[KW ⁻¹]	70	56	40	35	28	25	16
Insulation Resistance IEC60115-1 clause 4.6	[MΩ]	> 10 ⁴						
Max. Working Voltage	[V] _{RMS}	$\sqrt{P_{70} \times R}$						
Dielectric Withstanding Voltage IEC60115-1 clause 4.7 (1[min])	[V] _{RMS}	2000						

DIMENSIONS [mm]



Type	Historical P/N:	L ₁
KHS400	KH206 - 8	20 ± 1,0
KHS500	KH208 - 8	25 ± 1,0
KHS700	KH210 - 8	38 ± 1,0
KHS800	KH212 - 8	25 ± 1,0
KHS10A	KH214 - 8	38 ± 1,0
KHS11A	KH216 - 8	50 ± 1,5
KHS17A	KH218 - 8	75 ± 2,0

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PERFORMANCE DATA

Type		KHS400	KHS500	KHS700	KHS800	KHS10A	KHS11A	KHS17A
Historical Part Number		KH206-8	KH208-8	KH210-8	KH212-8	KH214-8	KH216-8	KH218-8
Derating Linear	[°C]	70...350 (0W)						
Climatic Category		55/200/21						
Failure Rate <i>(Total, θ, max, 60[%] cont. lev.)</i>	[10 ⁻⁹ h ⁻¹]	appr. 100 depends on value						
Endurance <i>IEC60115-1 clause 4.25 (P₇₀ @ 70[°C], 1000[h])</i>	±[%]	3						
Short Time Overload <i>IEC60115-1 clause 4.13 (10 times rated power for 5 seconds)</i>	±[%]	2,0						
Damp Heat, Steady State <i>IEC60115-1 clause 4.24 (40[°C], 93[% r.h.], 56[d])</i>	±[%]	2						
Climatic Sequence <i>IEC60115-1 clause 4.23</i>	±[%]	2						
Resistance to Soldering Heat <i>IEC60115-1 clause 4.18 (260^{±5}[°C], 3,5^{±1}[s])</i>	±[%]	0,2						
Terminal Strength	±[%]	1						
Terminal Tensile Strength	[N]	50						
Solderability <i>IEC60068-2-20 (245^{±5}[°C] 3^{±0,5}[s])</i>		Solder bath method (> 95% coverage)						
Marking <i>IEC60062</i>		Printed in clear						

ELECTRICAL CHARACTERISTICS

RESISTANCE RANGE (minimum)

New P/Nr. Type	Historical P/N:	± 10 [%]	± 5 [%]
KHS400	KH206 - 8	0R051	0R1
KHS500	KH208 - 8	0R075	0R15
KHS700	KH210 - 8	0R11	0R33
KHS800	KH212 - 8	0R075	0R15
KHS10A	KH214 - 8	0R11	0R33
KHS11A	KH216 - 8	0R15	0R51
KHS17A	KH218 - 8	0R27	0R91

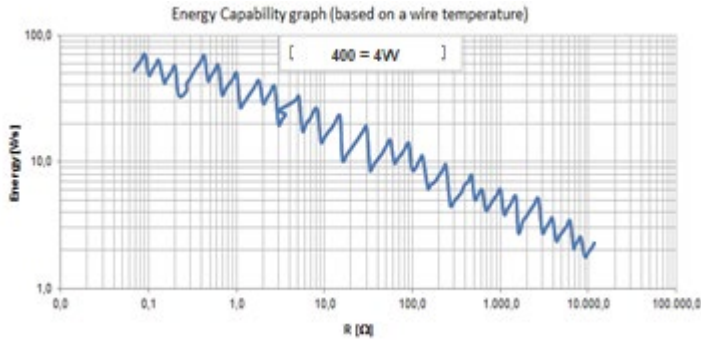
TEMPERATURE COEFFICIENT

New P/Nr. Type	Historical P/N:	400 ± 50 ppm/K		-20 ± 60 ppm/K		0 ± 10 ppm/K	
KHS400	KH206 - 8	≥ 0R051	≤ 0R2	≥ 0R22	≤ 300R	≥ 330R	≤ 12K
KHS500	KH208 - 8	≥ 0R075	≤ 0R3	≥ 0R33	≤ 470R	≥ 510R	≤ 15K
KHS700	KH210 - 8	≥ 0R11	≤ 0R68	≥ 0R75	≤ 910R	≥ 1K	≤ 33K
KHS800	KH212 - 8	≥ 0R075	≤ 0R3	≥ 0R33	≤ 470R	≥ 510R	≤ 15K
KHS10A	KH214 - 8	≥ 0R11	≤ 0R68	≥ 0R75	≤ 910R	≥ 1K	≤ 33K
KHS11A	KH216 - 8	≥ 0R15	≤ 1R	≥ 1R1	≤ 1K3	≥ 1K5	≤ 47K
KHS17A	KH218 - 8	≥ 0R27	≤ 1R6	≥ 1R8	≤ 2K4	≥ 2K7	≤ 82K

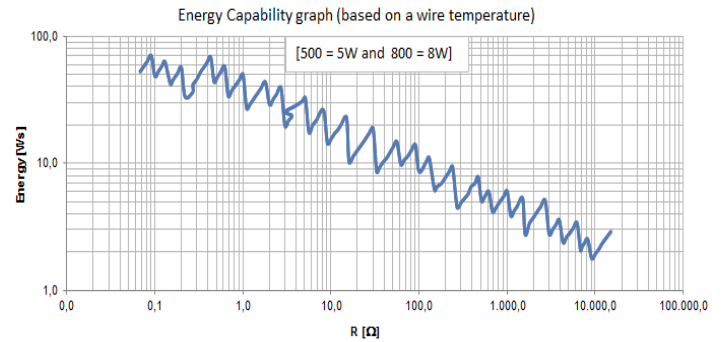
KHS Series Datasheet

PERFORMANCE GRAPHS

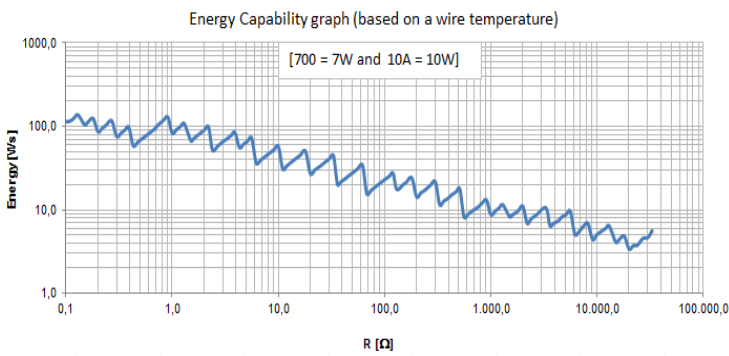
KHS400



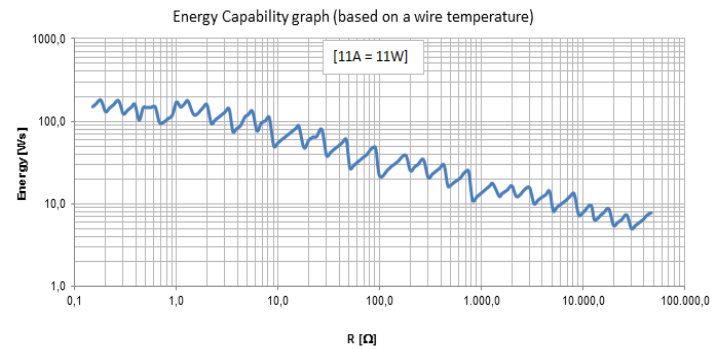
KHS500 and KHS800



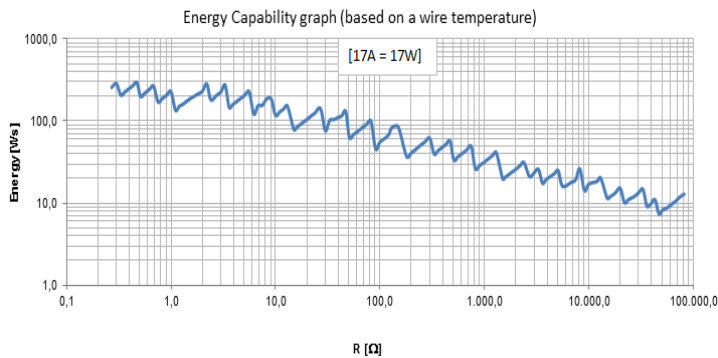
KHS700 and KHS10A



KHS11A



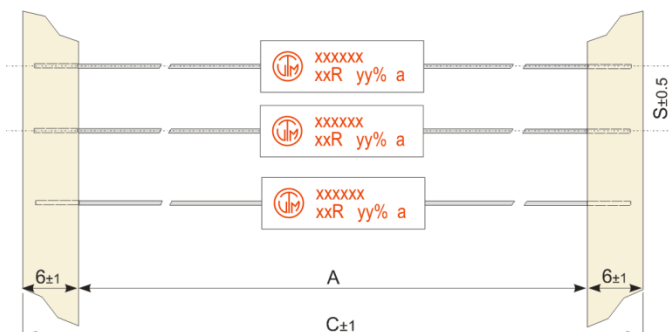
KHS17A



KHS Series Datasheet

PACKAGING

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



ALTERNATIVE LEAD CONFIGURATIONS

This type KHS is also available in a different pre-forming, as shown below, other's upon request.

New P/Nr. Type	Historical P/N:	Pack Code	Pieces	Forming Type
KHS400	KH206 - 8	B = Bulk	200	AX- = Axial
KHS500	KH208 - 8		200	
KHS700	KH210 - 8		200	
KHS800	KH212 - 8		200	
KHS10A	KH214 - 8		100	
KHS11A	KH216 - 8		100	
KHS17A	KH218 - 8		100	

New P/Nr. Type	Historical P/N:	Pack Code	Pieces	Forming Type (Inner Taping dim.)	A	C	S
KHS400	KH206 - 8	R = Taped in Reel	1000	83-	83	95	10
KHS500	KH208 - 8		1000		83	95	10
KHS700	KH210 - 8		1000		83	95	10
KHS800	KH212 - 8		500		83	95	10
KHS10A	KH214 - 8		500		83	95	10

THROUGH HOLE VERSION

Axial Goal Post (AG-)	Axial Goal Post Kink (AK-)	Radial (RD-)	Radial 2 Kink (RK-)

For horizontal and vertical pre-forming please consult your local sales contact.