

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

Historical VTM Part Nr.:

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

APPLICATIONS



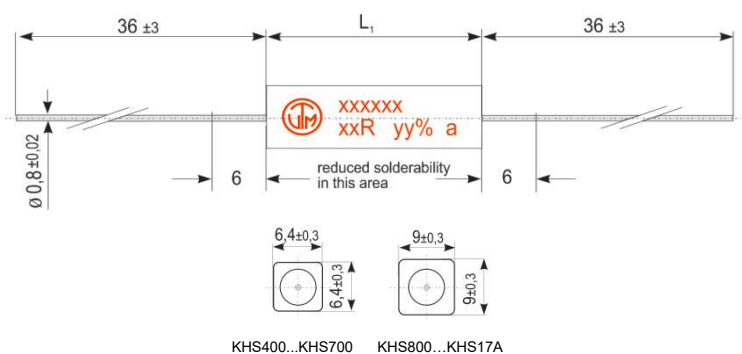
FEATURES

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.	Please check the table below						
	Max.	12K	15K	33K	15K	33K	47K	82K
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_o, max, 60[%] cont. lev.)</i>	[10 ⁻⁹ h ⁻¹]	appr. 100 depends on value						
Endurance <i>IEC60115-1 clause 4.25 (P_{70} @ 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	OR051	OR1
KHS500	KH208 - 8	OR075	OR15
KHS700	KH210 - 8	OR11	OR33
KHS800	KH212 - 8	OR075	OR15
KHS10A	KH214 - 8	OR11	OR33
KHS11A	KH216 - 8	OR15	OR51
KHS17A	KH218 - 8	OR27	OR91

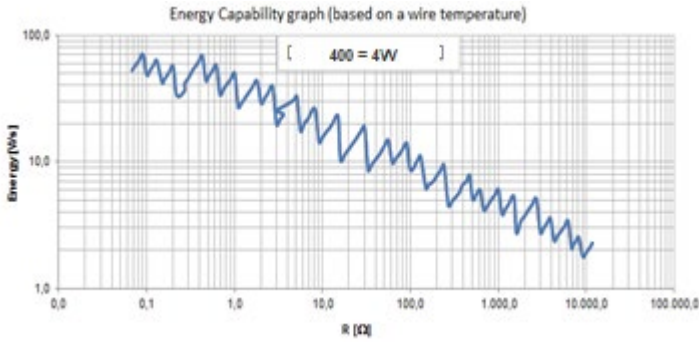
TEMPERATURE COEFFICIENT

New P/Nr. Type	Historical P/N:	400 ± 50 ppm/K		-20 ± 60 ppm/K		0 ± 10 ppm/K	
KHS400	KH206 - 8	≥ OR051	≤ OR2	≥ OR22	≤ 300R	≥ 330R	≤ 12K
KHS500	KH208 - 8	≥ OR075	≤ OR3	≥ OR33	≤ 470R	≥ 510R	≤ 15K
KHS700	KH210 - 8	≥ OR11	≤ OR68	≥ OR75	≤ 910R	≥ 1K	≤ 33K
KHS800	KH212 - 8	≥ OR075	≤ OR3	≥ OR33	≤ 470R	≥ 510R	≤ 15K
KHS10A	KH214 - 8	≥ OR11	≤ OR68	≥ OR75	≤ 910R	≥ 1K	≤ 33K
KHS11A	KH216 - 8	≥ OR15	≤ 1R	≥ 1R1	≤ 1K3	≥ 1K5	≤ 47K
KHS17A	KH218 - 8	≥ OR27	≤ 1R6	≥ 1R8	≤ 2K4	≥ 2K7	≤ 82K

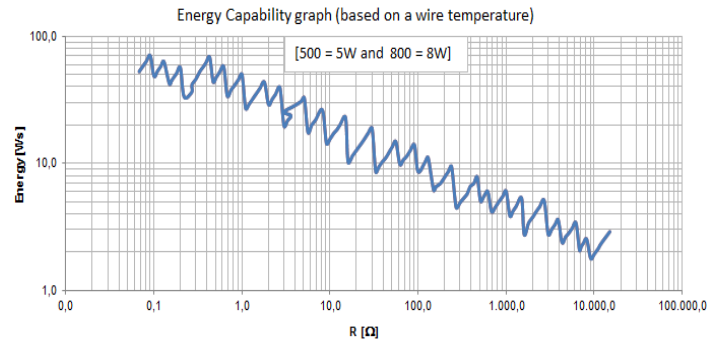
KHS Series Datasheet

PERFORMANCE GRAPHS

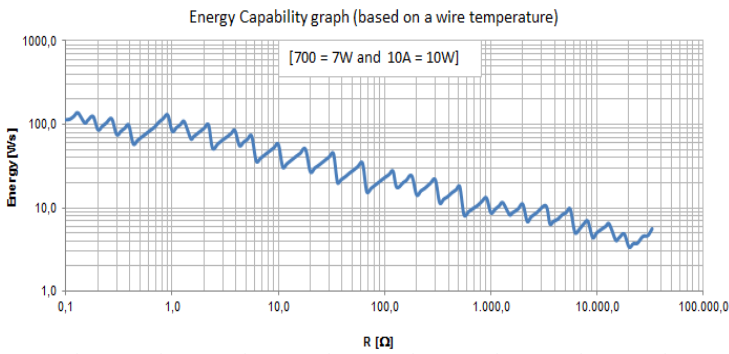
KHS400



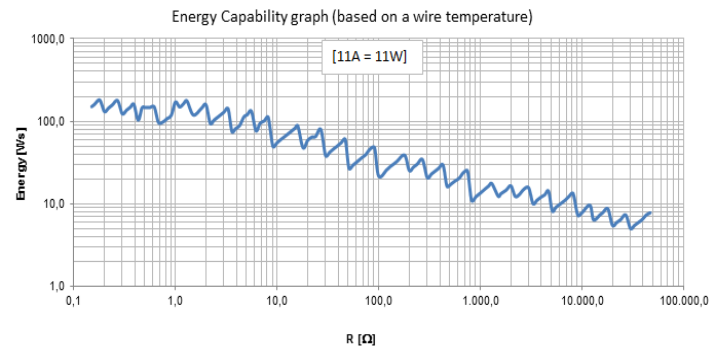
KHS500 and KHS800



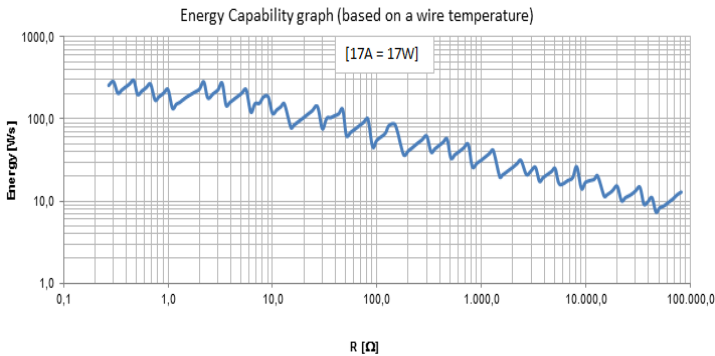
KHS700 and KHS10A



KHS11A



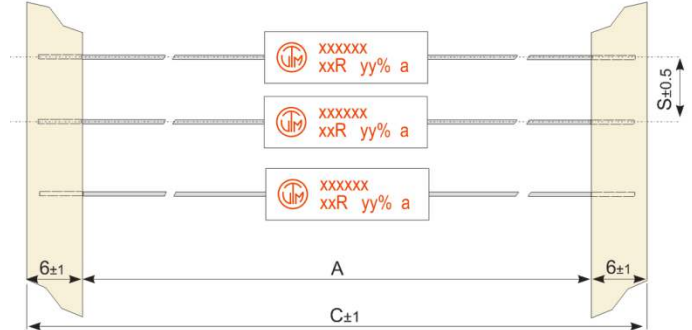
KHS17A



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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.