

KVS Series Datasheet

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

ORDERING CODE-Example

New SAP Part Nr.:

KVS	400	K	B	-	RD-	150R	AA
Serie	Power rating	Tol. J = ±5% K = ±10%	Pack-Code B = Bulk	TCR - Base on spec.	Forming type RD- = Radial	R Value	Special AA = Standard

Historical VTM Part Nr.:

KV206-3	5	B	150R
Type	Tol. ±5% = J ±10% = K	Pack-Code B = Bulk	R Value

APPLICATIONS

- Automotive
- Charger
- Alternative Energy
- Power Supply
- Home Appliances
- Industrial

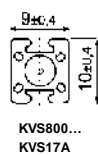
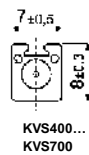
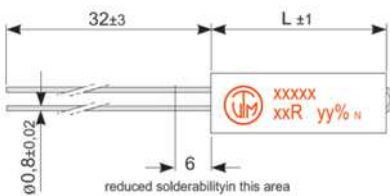
FEATURES

- Pulse version available
- Other preforming available
- RoHS & REACH Compliant

ELECTRICAL SPECIFICATIONS

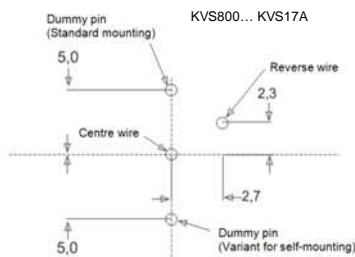
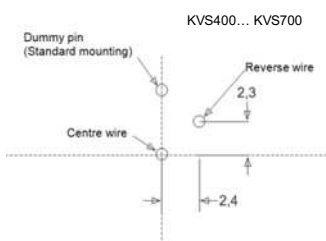
Type		KVS400	KVS500	KVS700	KVS800	KVS10A	KVS11A	KVS17A
Historical Part Number		KV206-3	KV208-3	KV210-3	KV212-3	KV214-3	KV216-3	KV218-3
Nominal Power Rating P_{70}	[W]	4	5	7	8	10	11	17
Resistance Range (Other values upon request)	[Ω]	Min. 9K1	15K	33K	15K	33K	47K	82K
E-Series (preferred)		E24 = 5% ; E12 = 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
KVS400	KV206-3	20 ±1,0
KVS500	KV208-3	25 ±1,0
KVS700	KV210-3	38 ±1,0
KVS800	KV212-3	25 ±1,0
KVS10A	KV214-3	38 ±1,0
KVS11A	KV216-3	50 ±1,5
KVS17A	KV218-3	75 ±2,0

PCB – Layout for KVS



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PERFORMANCE DATA

Type		KVS400	KVS500	KVS700	KVS800	KVS10A	KVS11A	KVS17A
Historical Part Number		KV206-3	KV208-3	KV210-3	KV212-3	KV214-3	KV216-3	KV218-3
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						
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 CHARACTERISTIC

RESISTANCE RANGE (minimum)

New P/Nr. Type	Historical P/N:	± 10 [%]	± 5 [%]
KVS400	KV206-3	OR051	OR1
KVS500	KV208-3	OR075	OR15
KVS700	KV210-3	OR11	OR33
KVS800	KV212-3	OR075	OR15
KVS10A	KV214-3	OR11	OR33
KVS11A	KV216-3	OR15	OR51
KVS17A	KV218-3	OR27	OR91

TEMPERATURE COEFFICIENT

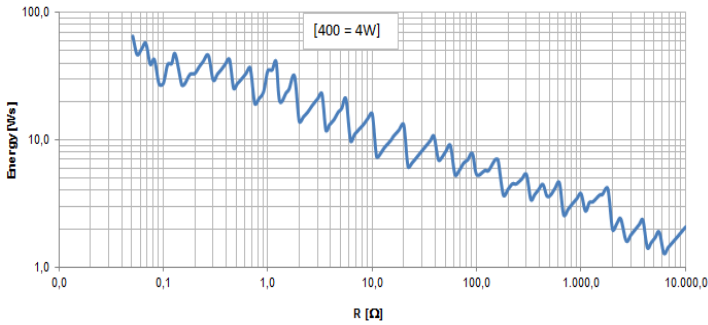
New P/Nr. Type	Historical P/N:	400 ± 50 ppm/K		-20 ± 60 ppm/K		0 ± 10 ppm/K	
		≥	≤	≥	≤	≥	≤
KVS400	KV206-3	≥ OR051	≤ OR2	≥ OR22	≤ 300R	≥ 330R	≤ 9K1
KVS500	KV208-3	≥ OR075	≤ OR3	≥ R33	≤ 470R	≥ 510R	≤ 15K
KVS700	KV210-3	≥ OR11	≤ OR68	≥ OR75	≤ 910R	≥ 1K	≤ 33K
KVS800	KV212-3	≥ OR075	≤ OR3	≥ OR33	≤ 470R	≥ 510R	≤ 15K
KVS10A	KV214-3	≥ OR11	≤ OR68	≥ OR75	≤ 910R	≥ 1K	≤ 33K
KVS11A	KV216-3	≥ OR15	≤ 1R	≥ 1R1	≤ 1K3	≥ 1K5	≤ 47K
KVS17A	KV218-3	≥ OR27	≤ 1R6	≥ 1R8	≤ 2K4	≥ 2K7	≤ 82K

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PERFORMANCE GRAPH'S

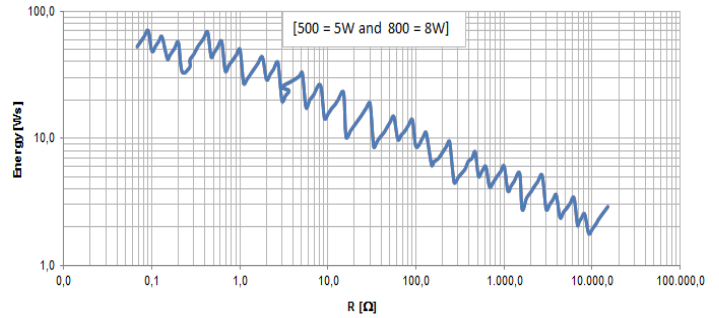
KVS400

Energy Capability graph (based on a wire temperature)



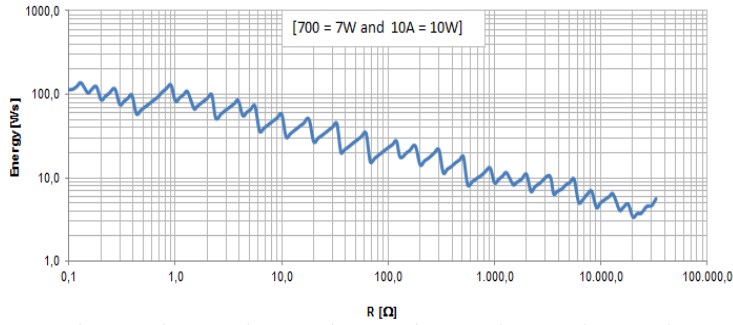
KVS500 and KVS800

Energy Capability graph (based on a wire temperature)



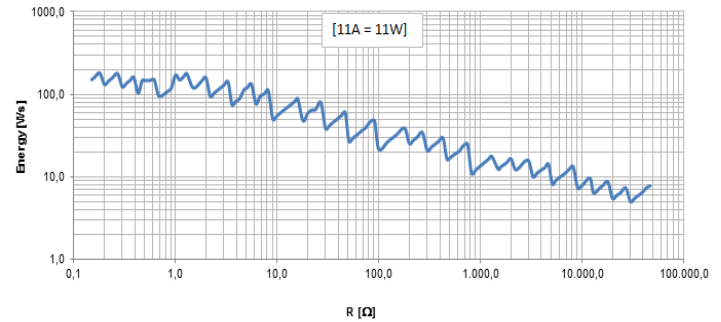
KVS700 and KVS10A

Energy Capability graph (based on a wire temperature)



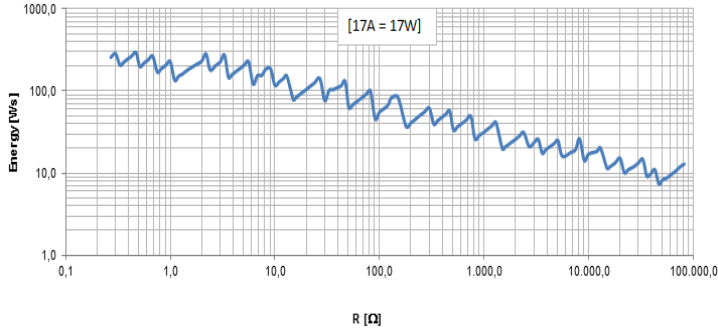
KVS11A

Energy Capability graph (based on a wire temperature)



KVS17A

Energy Capability graph (based on a wire temperature)



PACKAGING

The standard packaging for KVS in radial type is bulk, dimensions below.



New P/Nr. Type	Historical P/N:	Pack Code	Pieces	Forming Type
KVS400	KV206 - 3	B = Bulk	200	RD- = Radial
KVS500	KV208 - 3		200	
KVS700	KV210 - 3		200	
KVS800	KV212 - 3		200	
KVS10A	KV214 - 3		200	
KVS11A	KV216 - 3		200	
KVS17A	KV218 - 3		100	