

KWH Series Datasheet

Power Non - Inductive Resistors | Axial | Ceramic case

ORDERING CODE - Example

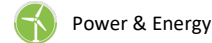
New SAP Part Nr.:

KWH	570	J	N	-	AX-	10R	AA
Serie	* Power rating	Tol. J = ±5%	Pack-Code N = Bulk with Non-Inductive Element	TCR - Base on spec.	Forming type AX- = Axial	R Value	Special AA = Standard

Historical VTM Part Nr.:

KWH05 - 002	5	B	10R
Type	Tol.	Pack-Code	R Value

APPLICATIONS



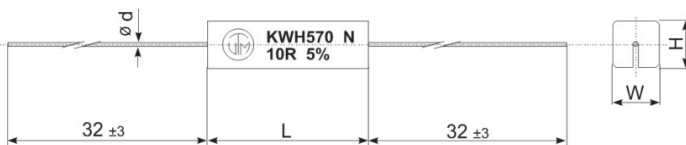
FEATURES

- Non-Inductive Style
- Board space saving
- High power to size ratio
- RoHs & REACH Compliant

ELECTRICAL SPECIFICATIONS

Type		KWH 160	KWH 310	KWH 340	KWH 570	KWH 790	KWH 11A	KWH 15A	KWH 20A	KWH 25A	KWH 30A	KWH 40A
Historical Part Number		KWH01002	KWH02002	KWH03002	KWH05002	KWH07002	KWH10002	KWH15002	KWH20002	KWH25002	KWH30002	KWH40002
Nominal Power Rating	*P ₂₅	1,6	3,1	3,4	5,7	7,9	11,3	15,0	20,0	25,0	30,0	40,0
	P ₄₀	1,4	2,7	3,0	5,0	7,0	10,0	13,3	17,7	22,1	26,5	35,4
	P ₇₀	1,0	2,0	2,2	3,7	5,2	7,4	9,8	13,1	16,3	19,6	26,2
Resistance Range (Other values upon request)	[Ω] Min.	R08	R08	R033	R033	R15	R25	R25	R36	R36	R36	R36
	[Ω] Max.	10R	10R	30R	30R	65R	100R	120R	160R	160R	160R	160R
E-Series (preferred)		E24 (Other upon request)										
Tolerances	±[%]	J = 5% (Other upon request)										
Temperature Coefficient	±[10 ⁻⁶ K ⁻¹]	300										
Working Temperature Range	[°C]	-55 ... +155										
Thermal Resistance	[KW ⁻¹]	85	42	39	23	16	11	9	6	5	4	3
Insulation Resistance IEC60115-1 clause 4.6	[MΩ]	> 10 ⁴										
Max. Working Voltage	[V] _{RMS}	200	250	350	350	500	500	500	500	1000	1000	1000
Dielectric Withstanding Voltage IEC60115-1 clause 4.7 (1[min])	[V] _{RMS}	500	500	700	700	1000	1000	1000	1000	2000	2000	2000

DIMENSIONS [mm]



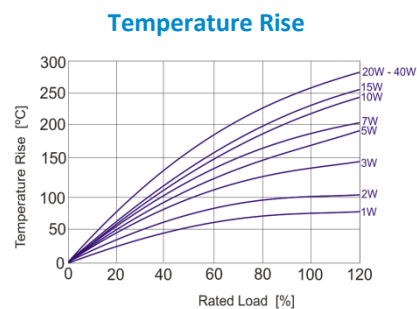
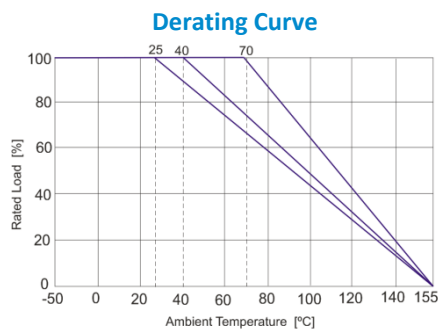
New P/Nr. Type	Historical P/N:	L	W	H	ø d ±0,05
KWH160	KWH01-002	13,0±1,0	5,5±1,0	5,5±1,0	0,6
KWH310	KWH02-002	18,0±1,0	7,0±1,0	7,0±1,0	0,65
KWH340	KWH03-002	22,0±1,5	8,0±1,0	8,0±1,0	0,8
KWH570	KWH05-002	22,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH790	KWH07-002	35,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH11A	KWH10-002	48,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH15A	KWH15-002	48,0±1,5	12,5±1,0	12,5±1,0	0,8
KWH20A	KWH20-002	60,0±5,0	12,5±1,0	12,5±1,0	0,8
KWH25A	KWH25-002	60,0±5,0	14,0±1,5	13,0±1,5	0,8
KWH30A	KWH30-002	77,0±5,0	18,0±1,5	17,0±1,5	0,8
KWH40A	KWH40-002	90,0±5,0	19,0±1,5	18,0±1,5	0,8

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PERFORMANCE DATA

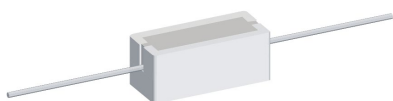
Type		KWH 160	KWH 310	KWH 340	KWH 570	KWH 790	KWH 11A	KWH 15A	KWH 20A	KWH 25A	KWH 30A	KWH 40A
Historical Part Number		KWH01-002	KWH02-002	KWH03-002	KWH05-002	KWH07-002	KWH10-002	KWH15-002	KWH20-002	KWH25-002	KWH30-002	KWH40-002
Derating Linear	[°C]	70...155 (0W)										
Temperature Cycling <i>IEC60115-1 clause 4.19</i> (-55 ~ +155[°C], 30[min] each, 5 cycles)	±[%]	2										
Periodic Electric Overload <i>IEC60115-1 clause 4.39</i>	±[%]	2										
Endurance <i>IEC60115-1 clause 4.25</i> (P_{70} @ 70[°C], 1000[h])	±[%]	5										
Damp Heat, Steady State <i>IEC60115-1 clause 4.24</i> (40[°C], 93[% r.h.], 56[d])	±[%]	5										
Resistance to Soldering Heat <i>IEC60115-1 clause 4.18</i> (260 ^{±5} [°C], 10 ^{±2} [s], 2.5~3.5[mm])	±[%]	1										
Robustness of terminations <i>IEC115-1 clause 4.16</i> (≥2,5[Kg], 10[s])	[N]	≥ 24.5										
Resistance to solvents of Marking <i>IEC60115-1 clause 4.30</i> (5 ^{+0.5} [min.], with ultrasonic)	±[%]	No deterioration of coatings and markings										
Solderability <i>IEC60068-2-20</i> (235 ⁺⁵ [°C] 3 ^{+0.5} [s])		Solder bath method (> 90% coverage)										
Marking <i>IEC60062</i>		Printed in clear										

DERATING CURVE & TEMPERATURE RISE



PACKAGING

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



New P/Nr. Type	Historical P/N:	Pieces	Pack Code	Forming Type
KWH160	KWH01-002	2000	N = Bulk with Non-Inductive element	AX- = Axial
KWH310	KWH02-002	1400		
KWH340	KWH03-002	1000		
KWH570	KWH05-002	900		
KWH790	KWH07-002	600		
KWH11A	KWH10-002	500		
KWH15A	KWH15-002	360		
KWH20A	KWH20-002	50		
KWH25A	KWH25-002	50		
KWH30A	KWH30-002	50		
KWH40A	KWH40-002	50		