



KWH Series Datasheet

Power Filme Resistors | Axial | Ceramic case | Metox Element

ORDERING CODE - Example

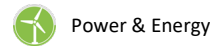
New SAP Part Nr.:

KWH	570	J	M	-	AX-	56K	AA
Serie	* Power rating	Tol.	Pack-Code	TCR	Forming type	R Value	Special
		J = ±5%	M = Bulk with Metox Element	- Base on spec.	AX- = Axial		AA = Standard

Historical VTM Part Nr.:

KWH05 – 003	5	B	56K
Type	Tol.	Pack-Code	R Value

APPLICATIONS



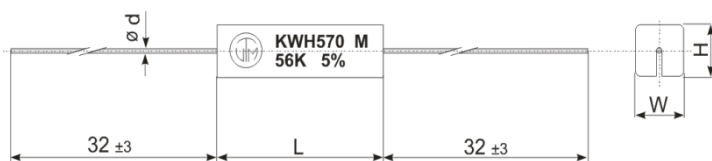
FEATURES

- Heat and flame resistance , Insulated
- High resistance value
- High Power Vs compact size
- 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		KWH01-003	KWH02-003	KWH03-003	KWH05-003	KWH07-003	KWH10-003	KWH15-003	KWH20-003	KWH25-003	KWH30-003	KWH40-003
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.	30R	39R	75R	150R	360R	560R	750R	1K2	1K2	1K2	1K2
	[Ω] Max.	47K	1M	1M	1M	1M	1M	1M	1M	1M	1M	1M
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]	> 1,000										
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	∅ d ±0,05
KWH160	KWH01-003	13,0±1,0	5,5±1,0	5,5±1,0	0,6
KWH310	KWH02-003	18,0±1,0	7,0±1,0	7,0±1,0	0,65
KWH340	KWH03-003	22,0±1,5	8,0±1,0	8,0±1,0	0,8
KWH570	KWH05-003	22,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH790	KWH07-003	35,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH11A	KWH10-003	48,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH15A	KWH15-003	48,0±1,5	12,5±1,0	12,5±1,0	0,8
KWH20A	KWH20-003	60,0±5,0	12,5±1,0	12,5±1,0	0,8
KWH25A	KWH25-003	60,0±5,0	14,0±1,5	13,0±1,5	0,8
KWH30A	KWH30-003	77,0±5,0	18,0±1,5	17,0±1,5	0,8
KWH40A	KWH40-003	90,0±5,0	19,0±1,5	18,0±1,5	0,8

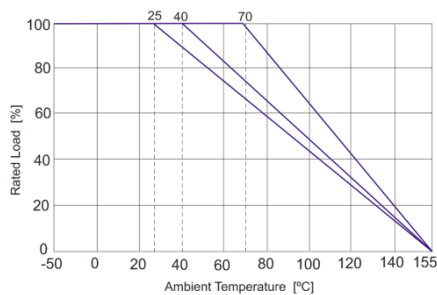
KWH Series Datasheet

PERFORMANCE DATA

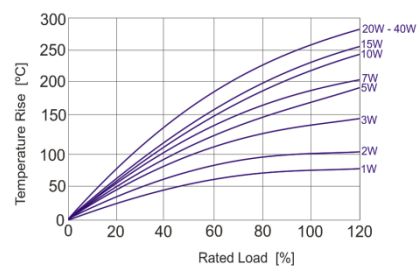
Type		KWH 160	KWH 310	KWH 340	KWH 570	KWH 790	KWH 11A	KWH 15A	KWH 20A	KWH 25A	KWH 30A	KWH 40A
Historical Part Number		KWH01-003	KWH02-003	KWH03-003	KWH05-003	KWH07-003	KWH10-003	KWH15-003	KWH20-003	KWH25-003	KWH30-003	KWH40-003
Derating Linear	[°C]	70...155 (0W)										
Temperature Cycling <i>IEC60115-1 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 ^{±1} [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

Derating Curve

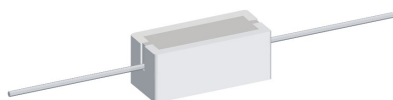


Temperature Rise



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	KWH01-003	2000	M = Bulk with Metox element	AX- = Axial
KWH310	KWH02-003	1400		
KWH340	KWH03-003	1000		
KWH570	KWH05-003	900		
KWH790	KWH07-003	600		
KWH11A	KWH10-003	500		
KWH15A	KWH15-003	360		
KWH20A	KWH20-003	50		
KWH25A	KWH25-003	50		
KWH30A	KWH30-003	50		
KWH40A	KWH40-003	50		