

KWH Series Datasheet

Power Wirewound Resistors | Axial | Ceramic case

ORDERING CODE-Example

New SAP Part Nr.:

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

Historical VTM Part Nr.:

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

APPLICATIONS

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

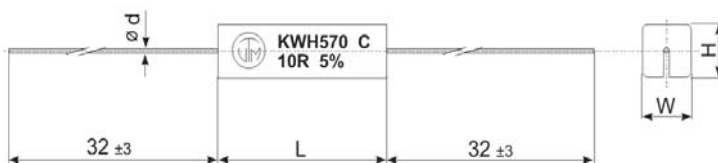
FEATURES

- Ceramic Core
- 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		KWH01	KWH02	KWH03	KWH05	KWH07	KWH10	KWH15	KWH20	KWH25	KWH30	KWH40
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	[Ω] Min.	R1	R03	R015	R015	R05	R08	R1	R15	R15	R15	R15
	Max.	27R	36R	68R	130R	330R	510R	680R	1K	1K	1K	1K
		(Other values upon request)										
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]



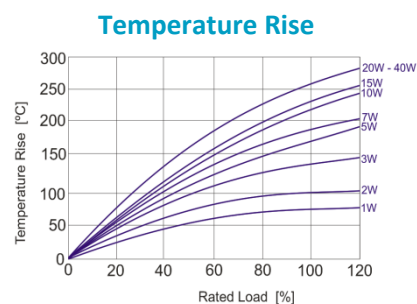
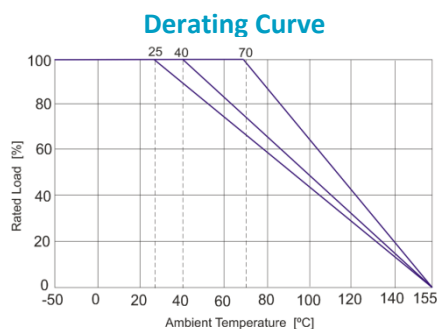
New P/Nr. Type	Historical P/N:	L	w	H	∅ d ±0,05
KWH160	KWH01	13,0±1,0	5,5±1,0	5,5±1,0	0,6
KWH310	KWH02	18,0±1,0	7,0±1,0	7,0±1,0	0,65
KWH340	KWH03	22,0±1,5	8,0±1,0	8,0±1,0	0,8
KWH570	KWH05	22,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH790	KWH07	35,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH11A	KWH10	48,0±1,5	9,5±1,0	9,0±1,0	0,8
KWH15A	KWH15	48,0±1,5	12,5±1,0	12,5±1,0	0,8
KWH20A	KWH20	60,0±5,0	12,5±1,0	12,5±1,0	0,8
KWH25A	KWH25	60,0±5,0	14,0±1,5	13,0±1,5	0,8
KWH30A	KWH30	77,0±5,0	18,0±1,5	17,0±1,5	0,8
KWH40A	KWH40	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	KWH02	KWH03	KWH05	KWH07	KWH10	KWH15	KWH20	KWH25	KWH30	KWH40
Derating Linear	[°C]	70...155 (0W)										
Temperature Cycling <i>IEC60115-1 clause 4.19</i> <i>(-55 ~ +155[°C], 30[min] each, 5 cycles)</i>	±[%]	2										
Periodic Electric Overload <i>IEC60115-1 clause 4.39</i>	±[%]	2										
Endurance <i>IEC60115-1 clause 4.25</i> <i>(P₇₀ @ 70[°C], 1000[h])</i>	±[%]	5										
Damp Heat, Steady State <i>IEC60115-1 clause 4.24</i> <i>(40[°C], 93[% r.h.], 56[d])</i>	±[%]	5										
Resistance to Soldering Heat <i>IEC60115-1 clause 4.18</i> <i>(260^{±5}[°C], 10^{±1}[s], 2.5~3.5[mm])</i>	±[%]	1										
Robustness of terminations <i>IEC115-1 clause 4.16</i> <i>(≥2,5[Kg], 10[s])</i>	[N]	24.5										
Resistance to solvents of Marking <i>IEC60115-1 clause 4.30</i> <i>(5^{±0.5}[min.], with ultrasonic)</i>	±[%]	No deterioration of coatings and markings										
Solderability <i>IEC60068-2-20</i> <i>(235^{±5}[°C] 3^{±0.5}[s])</i>		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	2000	C = Bulk with Ceramic core element	AX- = Axial
KWH310	KWH02	1400		
KWH340	KWH03	1000		
KWH570	KWH05	900		
KWH790	KWH07	600		
KWH11A	KWH10	500		
KWH15A	KWH15	360		
KWH20A	KWH20	50		
KWH25A	KWH25	50		
KWH30A	KWH30	50		
KWH40A	KWH40	50		