HMW Wire Wound Resistors Ceramic Encased

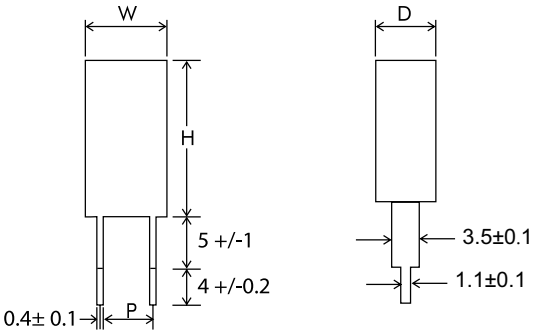
Termination

Material : E.D.D. CR. Mild Steel. Undercoat of copper, middle coat of nickel & top coat of dull tin plating. (ROHS Compliant / lead free plating.)

Marking

The resistors will be marked as Resistance value followed by tolerance & then symbol "*" for lead free leads & then date code depending upon space.e.g MW-5* J 1R0 – Marking will be KWX LOGO MW5* 1R0 J & datecode

Dimensions



Type	Power Rating at 70℃	Dimensions				Typical Weight Per PC (gms)
		W±1.0	H±1.5	D±1.0	P±1.0	
HMW5	5W	15.0	26.5	8.5	10.0	8.5
HMW9	9W	15.0	40.5	8.5	10.0	11.0

Ordering Information

Example:

HMW	5	J	T	100R
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	TCR	Resistance

(1)Type: HMW SERIES

(2)Power Rating: 5=5W,9W=9W

(3)Tolerance: K±10% ; J±5% ; H±3%; G±2%; F±1%

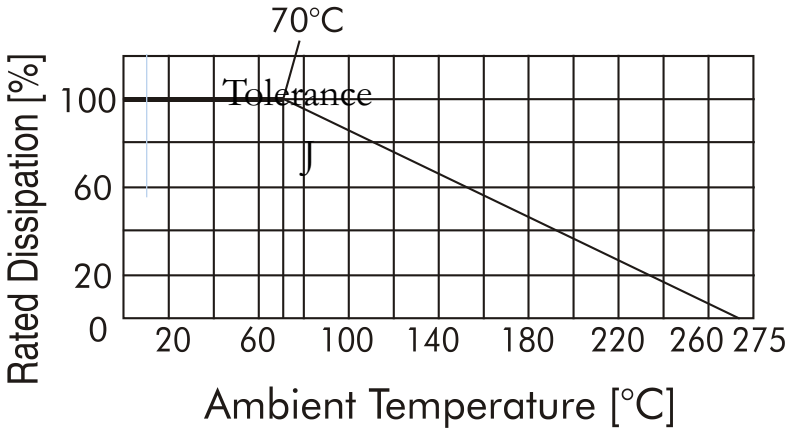
(4)TCR:± 90 ppm / ℃ [>10R], ± 80 ppm / ℃ [<10R],± 200 ppm / ℃ [<R10]

5)Resistance Value:10R0=10R、R10=0.1Ω、47R0=47Ω....

Applications And Ratings

Type	Rated Power (W)	Resistance Range (Ω)	TCR(PPM/℃)	Tolerance Range	Operating Temperature
HMW	5W 9W	R18 to 18K	± 80 ppm / ℃ [>10R] ± 90 ppm / ℃ [>10R] ± 200 ppm / ℃ [>10R]	K±10% ; J±5% ; H±3%; G±2%; F±1%	-55℃ to +275℃

Derating Curve



Electrical Characteristics/Data

Power Rating (Rated Ambient Temperature)	Full power dissipation at 70° C and linearly derated
	to zero at +275° C - Refer derating curve above
Operating Temperature Range (Ambient)	-55℃ to +275℃with suitable derating as per derating curve.
Voltage Rating / Limiting Voltage / Max Working Voltage	$\sqrt{V= PxR}$
Maximum Overload Voltage	Varies depending on resistance value, duration of overload
	and type of pulse waveform. (contact factory for details).
Resistance Tolerances Available J15- C - 5202 para 5.1	±10% (K); ±5% (J); ±3% (H); ±2%(G); ±1% (F)

Electrical And EnvironmentalCharacteristics

Parameter/ Performance Test	Test Method-Details	Performance Requirements
Short Time Overload	JIS- C - 5202 para 5.5 Condition B (Voltage corresponding to 10 times power for 5 sec)	ΔR ± [2%R0+ R05]
Dielectric Withstanding	JIS- C - 5202 para 5.7 Condition F Voltage / Voltage Proof (Limiting voltage x 2 or 500V)	ΔR ± [1%R0 + R05]
Temperature Co-efficient of Resistance	JIS- C - 5202 para 5.2	± 90 ppm / ° C [>10R] ± 80 ppm / ° C [<10R] ± 200 ppm / ° C [<R10]
Insulation Resistance	JIS- C - 5202 para 5.6 (Condition F)	>1000MΩ (Min)
Pulse Overload /	JIS- C - 5202 para 5.8 (Limiting Voltage x 4)	ΔR ± [2%R0+R05]
Intermittent Overload	1 sec on / 25 secs off 10,000 cycles	± 200 cycles
Endurance - under load with humidity	JIS- C - 5202 para 7.9 1000 hours at 40° C ± 2° C, 95% R.H with limiting voltage(1.5 hours on/0.5 hours off)	ΔR ± [5%R0+R05]-Typical
Load Life	JIS- C - 5202 para 7.10 1000 hours at 70° C limiting voltage (1.5 hours on / 0.5 off)	ΔR ± [3%R0+R05]-Average
Temperature Cycling	JIS- C - 5202 para 7.4 [Room temperature -55° C Room temperature 155℃/Room temperature for 5 cycles.]	ΔR ± [2%R0+R05] - Typical
Damp Heat (Steady State)	JIS- C - 5202 para 7.5	ΔR ± [2%R0+R05]-Average
Solvent Resistance	JIS- C - 5202 para 6.9 Solvent A - IPA for 60secs ± 10 secs	No effect on case filling or marking

Electrical Specifications

Parameter/ Performance Test	Test Method-Details	Performance Requirements
Pull Test/Robustness of Terminations	Direct load for 15 secs 2 to 4.5 kgs	No effect
Solderability	JIS- C - 5202 para 6.5	ΔR ± [1%R0+R05]-Typical Continuous and satisfactory(95% Min coverage)