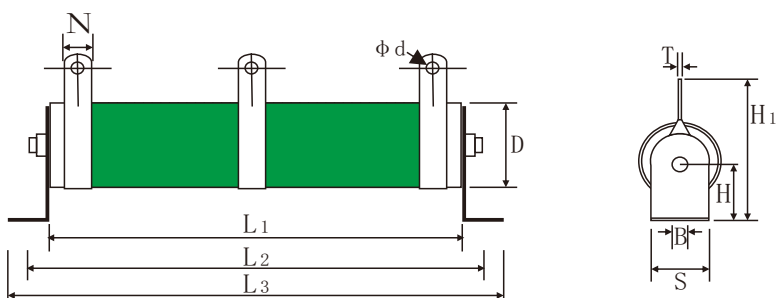




● Features

- Terminals suitable for soldering or bolt connection.
- Adjustable lug supplied
- High wattage applications
- All-welded construction
- Rugged lead free vitreous enamel coating.
- Flame resistant coating
- Additional adjustable lugs available
- RoHS compliant product available.

● Dimensions



Type	Power (W)	Dimensions (mm)										
		$L1 \pm 2$	$L2 \pm 5$	$L3 \pm 3$	$D \pm 2$	$B \pm 1$	$H \pm 1$	$H1 \pm 3$	$S \pm 2$	$N \pm 0.5$	$\phi d \pm 0.5$	$T \pm 0.5$
KTW	12	45	60	70	8	4.0	15	24	10	6	3.0	1.0
	20	60	75	84	18	5.0	25	34	20	6	3.5	1.0
	25	60	75	84	18	5.0	25	34	20	6	3.5	1.0
	30	82	104	120	20	5.0	25	34	20	6	3.5	1.0
	35	82	104	120	20	5.0	25	34	20	6	3.5	1.0
	40	102	124	146	28	5.0	28	68	28	8	4.5	1.0
	45	102	124	146	28	5.0	28	68	28	8	4.5	1.0
	50	102	124	146	28	5.0	28	68	28	8	4.5	1.0
	60	102	124	146	28	5.0	28	68	28	8	4.5	1.0
	75	152	174	196	28	5.0	28	68	28	8	4.5	1.0
	80	152	174	196	28	5.0	28	68	28	8	4.5	1.0
	100	182	204	226	28	5.0	28	68	28	8	4.5	1.0
	120	225	248	270	28	5.0	28	68	28	8	4.5	1.0
	150	225	248	270	28	5.0	28	68	28	8	4.5	1.0
	175	225	248	270	28	5.0	28	68	28	8	4.5	1.0
	200	225	248	270	28	5.0	28	68	28	8	4.5	1.0
	225	266	286	326	28	5.0	28	68	28	8	4.5	1.0
	250	285	304	345	40	5.0	40	85	40	8	4.5	1.0
	300	285	304	345	40	5.0	40	85	40	8	4.5	1.0
	350	316	338	375	40	5.0	40	85	40	8	4.5	1.0
	400	316	338	375	40	5.0	40	85	40	8	4.5	1.0
	500	318	338	378	50	6.5	50	100	50	10	5.5	1.0
	1000	508	528	568	64	6.5	64	130	64	10	5.5	1.0

Ordering Information

Example:

KTW	300	K	500+500	A
(1)	(2)	(3)	(4)	(5)
Series Name	Power Rating	Resistance Tolerance	Resistance	Special code

(1)Type: KTW SERIES

(2)Power Rating: 12=12W,50=50W,100=100W,300=300W.....

(3)Tolerance: K= $\pm 10\%$

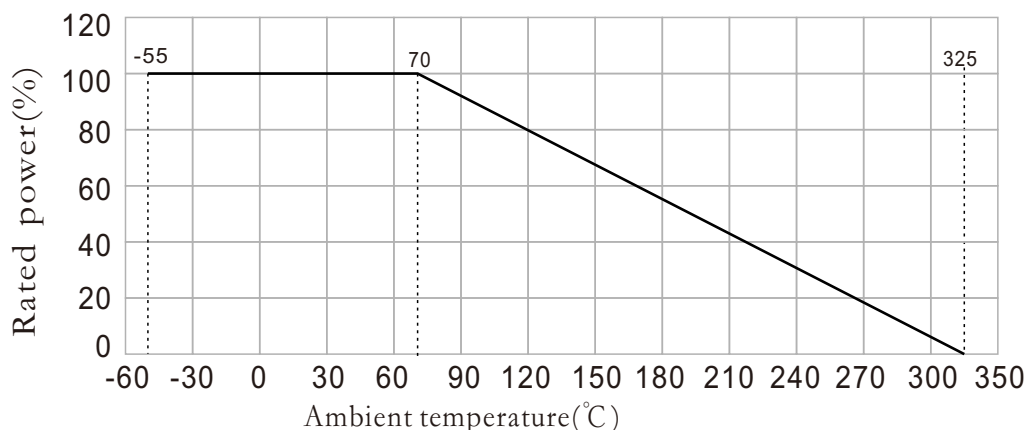
(4)Resistance Value:500 Ω +500 Ω , 1K Ω +1K Ω , 5K Ω +5K Ω

(5)Special code: A1=Without brackets,A2=With brackets

Applications And Ratings

Type	Power(W)	Resistance Range(Ω)	Tolerance	T.C.R PPM/°C	Max Working Voltage (V)	Max Overload Voltage (V)	Operating Temp.Range
KTW	12	1 Ω ~10K Ω +1 Ω ~10K Ω	$\pm 1\%$	-260PPM/°C $\leq$ TCR $\leq$ +260PPM/°C	$\sqrt{P \cdot R}$	$\sqrt{10 P \cdot R}$	-55°C ~ 325°C
	20	1 Ω ~15K Ω +1 Ω ~15K Ω					
	25	1 Ω ~25K Ω +1 Ω ~25K Ω					
	30	1 Ω ~30K Ω +1 Ω ~30K Ω					
	35	1 Ω ~50K Ω +1 Ω ~50K Ω					
	40	1 Ω ~50K Ω +1 Ω ~50K Ω					
	45	1 Ω ~50K Ω +1 Ω ~50K Ω					
	50	1 Ω ~100K Ω +1 Ω ~100K Ω					
	60	1 Ω ~100K Ω +1 Ω ~100K Ω	$\pm 2\%$				
	75	1 Ω ~100K Ω +1 Ω ~100K Ω					
	80	1 Ω ~100K Ω +1 Ω ~100K Ω	$\pm 5\%$				
	100	1 Ω ~100K Ω +1 Ω ~100K Ω					
	120	1 Ω ~100K Ω +1 Ω ~100K Ω	$\pm 10\%$				
	150	1 Ω ~100K Ω +1 Ω ~100K Ω					
	175	1 Ω ~100K Ω +1 Ω ~100K Ω					
	200	1 Ω ~100K Ω +1 Ω ~100K Ω					
	250	1 Ω ~100K Ω +1 Ω ~100K Ω					
	300	1 Ω ~100K Ω +1 Ω ~100K Ω					
	350	1 Ω ~100K Ω +1 Ω ~100K Ω					
	400	1 Ω ~100K Ω +1 Ω ~100K Ω					
500	1.5 Ω ~15K Ω +1.5 Ω ~15K Ω						
1000	3 Ω ~27K Ω +3 Ω ~27K Ω						

Derating Curve



● Performance

Test Items	Performance	Test Methods(JIS C 5201-1)
Temperature coefficient	$-260\text{PPM}/^{\circ}\text{C} \leq \text{TCR} \leq +260\text{PPM}/^{\circ}\text{C}$	Test resistance value at normal temperature and normal temperature added 100°C , calculate $^{\circ}\text{C}$ resistance value change rate.
Short-time overload	$\Delta R \leq \pm (2\%R0 + 0.05\Omega)$	According 10 times rated power to account the power or max. overload voltage(get the lower) for 5seconds.
Resistance to soldering heat	$\Delta R \leq \pm (1\%R0 + 0.05\Omega)$	Immerge into the $350 \pm 10^{\circ}\text{C}$ tin stove for 2~3 seconds
Solderability	Tth soldering area is over 98%	Immerge into the $245 \pm 3^{\circ}\text{C}$ tin stove for 2~3 seconds
Temperature cycle	$\Delta R \leq \pm (2\%R0 + 0.05\Omega)$	At -55°C for 30min, then at $+25^{\circ}\text{C}$ for 10~15min, then at $+155^{\circ}\text{C}$ for 30min, then at $+25^{\circ}\text{C}$ for 10~5min, total 5cycles.
Load life in humidity	$\Delta R \leq \pm (5\%R0 + 0.1\Omega)$	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5hours on and half-hour off) at the $40 \pm 2^{\circ}\text{C}$ and 90~95% relative humidity.
Load life in heat	$\Delta R \leq \pm (5\%R0 + 0.05\Omega)$	Overload rated voltage or Max.working voltage(get the lower)for 1000hours (1.5hours on and half-hour off) at the $70 \pm 2^{\circ}\text{C}$.
Nonflammability	No visible flame	Respectively load AC voltage by 5,10,16 times rated power for 5 minutes.
Adjustability	10% to 90% of full value. Wattage is proportional to this adjusted resistance value.	
Coating	Lead free vitreous enamel. Large models (500 watts and up) are supplied in Silicone Ceramic. Also available in low-cost Centohm coating; Consult factory.	
Terminals	Solder coated radial lug. RoHS solder composition is 96% Sn, 3.5% Ag, 0.5% Cu	
Adjustable	Nickel plated steel. (Screwdriver type adjustable lug supplied	
terminal	standard. Other types, including silver contact units, available.)	
Derating	Linearly from 100% @ $+25^{\circ}\text{C}$ to 0% @ $+350^{\circ}\text{C}$.	
Tolerance	$\pm 10\%$ (K)	
Power rating :	Based on 25°C free air rating. The stated wattage rating applies only when the entire resistance is in the circuit. Setting the lug at an intermediate point reduces the wattage rating by approximately the same proportion. Example: If the lug is set at half resistance, the wattage is reduced by approx. one-half.	
Overload	10 times rated wattage for 5 seconds.	
Dielectric withstanding voltage	1000 VAC: 12 to 100 watt rating. 3000 VAC: 175 and 225 watt rating (measured from terminal to mounting bracket)	
Max. amps	To calculate, use the formula $\sqrt{P/R}$.	