

INTRODUCTION

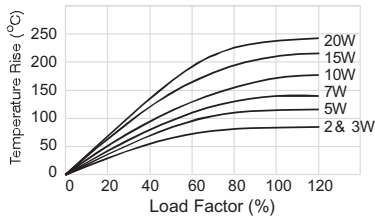
Cement-Box type resistors offer a choice of resistive elements inside a white flameproof cement box. In addition to being flameproof, these resistors are also non-corrosive and humidity proof. The available resistive elements are:

- SQ _____ - Standard wire wound (all welded construction)
- MSQ _____ - Metal oxide core
(low inductance, high resistance)
- NSQ _____ - Non-Inductively wound
(Ayrton-Perry Method, all welded construction)
- GSQ _____ - Fiber Glass Core

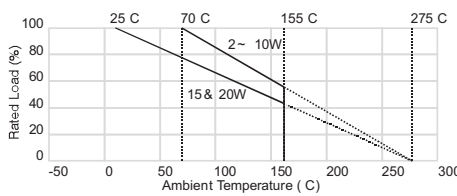
PART NUMBER EXAMPLE

MSQM 5W - 47K - J

TEMPERATURE RISE



DERATING CURVE



SPECIFICATIONS

CHARACTERISTICS

Test Items	Spec.	Condition
Wirewound Resistance Temp. Coeff.	Typical $\le 1\Omega = 300\text{ppm}$ >math>1\Omega = 200\text{ppm}</math>	JIS.C.5202.2.5.2
Metal Oxide Resistance Temp. Coeff.	Typical $\pm 200\text{ppm}/^\circ\text{C}$	-55 °C ~ +200°C
Moisture Load Life Cycle Test	$\pm 3\%$	40°C 95% @ RH 1,000hrs
Standard Tolerance	J = $\pm 5\%$, K = $\pm 10\%$	-25°C
Maximum Working Voltage*	500V 750V 1000V	2W, 3W, 5W, 7W 10W 15W, 20W, 25W
Dielectric	$\pm 2\% + 0.05$	1000V, 1 min
Insulation Resistance	$> 10^2 \text{ M}\Omega$	500Vdc, 1 min
Short Term Overload	$\pm (2\% + 0.05\Omega)$	1000V, 1 min
Load Life	$\pm (5\% + 0.05\Omega)$	70°C for 1000 hours
Humidity	$\pm 5\% + 0.05\Omega$	40°C, 90% RH, 1000 hours
Solderability	95% coverage min.	230°C, 5 sec.
Resistance to Solder Heat	$\pm (2\% + 0.05\Omega)$	260°C, 10 sec.

*Maximum Voltage per value to be determined by Ohms Law but not to exceed noted voltage.

Series					Resistance Range					
	W	H	L	d	P (SQH Series)	SQ_	MSQ_			
SQP1W	6±1	6±1	14±1	0.6±0.05		0.01 - 75	1.0 - 33K			
SQP2W	7±1	7±1	18±1.5	0.65±0.05		0.01 - 100	1.0 - 33K			
SQP3W	8±1	8±1	22±1.5	0.8±0.05		0.01 - 300	1.0 - 100K			
SQP5W	10±1	9±1	22±1.5	0.8±0.05	5±1	0.01 - 300	1.0 - 100K			
SQP7W	10±1	9±1	35±1.5	0.8±0.05	10±1	0.1 - 600	1.0 - 100K			
SQP10W	10±1	9±1	48±1.5	0.8±0.05	10±1	0.1 - 1.2K	1.0 - 100K			
SQP15W	12.5±1	11.5±1	48±1.5	0.8±0.05		0.5 - 1.5K				
SQP20W	14±1	13.5±1	60±1.5	0.8±0.05		0.5 - 1.5K				
SQP25W	14±1	13.5±1	60±1.5	0.8±0.05		0.5 - 1.5K				
	W	H	L	T		SQ_	MSQ_			
SQT5W	10±1	9±1	22±1.5	1.5±0.5		0.1 - 600	1.0 - 100K			
SQT7W	10±1	9±1	35±1.5	3.0±0.5		0.1 - 1.2K	1.0 - 100K			
SQT10W	10±1	9±1	48±1.5	3.0±0.5		0.5 - 1.5K				
	W	H	T	P		SQ_	MSQ_			
SQM2W	11±1	20.5±1.5	7±1	5		0.01-100	1.0 - 33K			
SQM3W	11±1	20.5±1.5	7±1	5		0.01-100	1.0 - 33K			
SQM5W	13±1	25±1.5	9±1	5		0.01-300	1.0 - 100K			
SQM7W	13±1	39±1.5	9±1	5		0.1 - 500	1.0 - 100K			
SQM10W	13±1	51±1.5	9±1	5		0.1 - 600	1.0 - 75K			
SQMX10W	16±1	35±1.5	12±1	7.5		0.1 - 360	1.0 - 100K			
SQMX12.5W	16±1	35±1.5	12±1	7.5		0.1 - 600				
	W	H	L	P	H1	P1	P2	SQ_	MSQ_	
SQZ5W	10±1	10±1	27±1.5	15±1	10.5±1	4.5-7.5	1.6±0.2	0.01 - 300	1.0 - 50K	
SQZ7W	10±1	10±1	35±1.5	20±1	10.5±1	7±1	1.6±0.2	0.1 - 600	1.0 - 50K	
SQZ10W	10±1	12±1	48±1.5	32±1	10.5±1	7±1	1.6±0.2	0.1 - 600	1.0 - 50K	
SQZ15W	12±1	12±1	48±1.5	32±1	15±1	10±1	3±0.2	0.1 - 1K		
SQZ20W	12±1	12±1	62±1.5	42±1	15±1	10±1	3±0.2	0.1 - 1K		
SQZ25W	12±1	12±1	62±1.5	42±1	15±1	10±1	3±0.2	0.1 - 1K		
SQH	5W to 10W specifications are the same as SQP5W to 10W									
	W	H	L	P	H1	T	Diagram	SQ_	MSQ_	
SQU10W	10±1	9±1	48±1	35±1	18±1	0.4	A	0.1-270	271-50K	
SQU15W	12.5±1	11.5±1	48±1	32±1	21±1	0.4	A	1-470	471-150K	
SQU20W	12.5±1	13.5±1	63±1	44±1	21±1	0.4	A	1-560	561-150K	
SQU30W	19±1	19±1	75±1	55±1	32±1	0.8	B	1-820	821-150K	
SQU40W	19±1	19±1	90±1	70±1	32±1	0.8	B	1-1K	1.1K-150K	

