

# Wire Wound Resistors Surface Mount Type

KNS Series

**MERITEK**

## FEATURE

- Temperature Coefficient of Resistance:  $\pm 200\text{ppm}/^\circ\text{C}$  at  $-55\sim 200^\circ\text{C}$
- High Power Rating up to 5W
- Superiod Surge Capability
- Elecellent Stability at Environmental Conditions
- Excellent Mechanical Strength and Electrical Stability
- Molded Encapsulation (UL940V0)



## PART NUMBERING SYSTEM

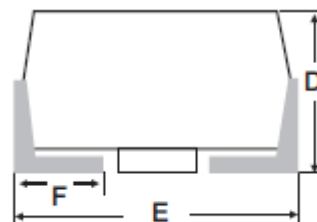
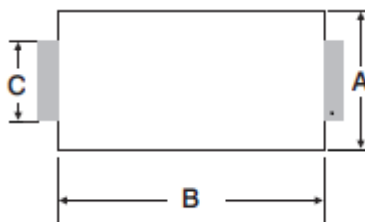
**KNS** **5W** **5R0** **F**  
(1) (2) (4) (5)



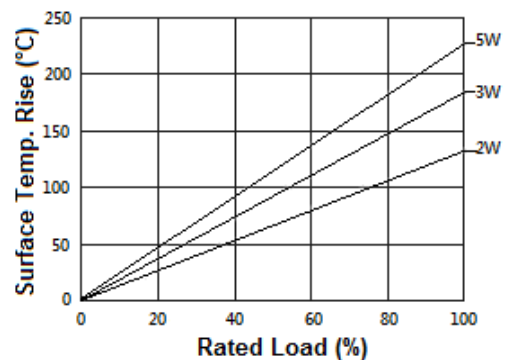
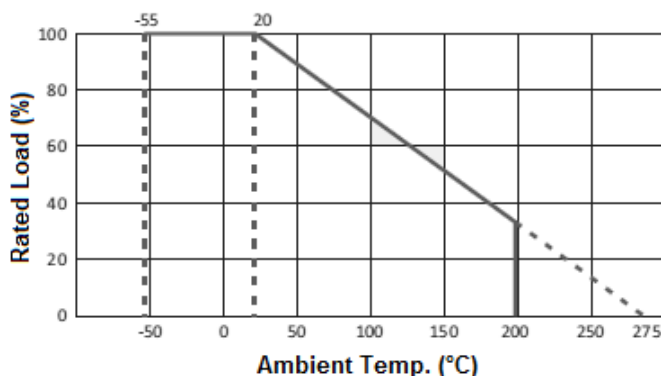
No	Item	Code	Description	Series Reference
(1)	Meritek Series	KNS	Wire Wound Resistor	Surface Mount Type
(2)	Power Rating	5W	5W	2W, 3W Rated Power
(4)	Resistance	5R0	5R0: 5.0Ω	100: 10Ω, 0.1~680 Ω
(5)	Tolerance	F	F: $\pm 1\%$	J: $\pm 5\%$

## ELECTRICAL CHARACTERISTICS AND DIMENSIONS

Rated Power	Resistance	Dimensions (mm)						T.C.R.
		A	B	C	D	E Max	F	
2W	0.1~200Ω	4.0±0.3	6.7±0.3	1.4±0.3	3.55±0.3	7.9	1.5±0.3	$\pm 200\text{ppm}/^\circ\text{C}$
3W	0.1~300Ω	5.5±0.3	10.5±0.3	1.7±0.3	5.0±0.3	12	2.3±0.3	
5W	0.1~680Ω	7.3±0.3	13.5±0.3	1.7±0.3	6.8±0.3	17	2.5±0.3	



## POWER DERATING CURVE AND SURFACE TEMPERATURE RISE



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## RELIABILITY TEST CONDITION AND REQUIREMENT

Item	Test Condition	Requirement
Temperature Coefficient of Resistance (T.C.R.)	-55 °C~200 °C	±200ppm/°C
Power Rating Load	Rated voltage for 30 minutes	Surface temp. 275°C Max, $\Delta R/R \leq \pm 1\%$
Short Time Overload	5 times rated power for 5 seconds	$\Delta R/R \leq \pm 1\%$
Dielectric Withstanding Voltage	500VAC for 1 minute	No evidence of mechanical damage or insulation breakdown.
Insulation Resistance	500VDC megger	10,000M $\Omega$
Solderability	235±5°C for 2 seconds	95% minimum coverage
Resistance to Soldering Heat	270±5°C for 10±1 seconds	$\Delta R/R \leq \pm 1\%$ , No evidence of mechanical damage
Temperature Cycle	55 °C(30min), Room Temp.(3min), 200 °C(30min), Room Temp.(3min) 5 Cycles	$\Delta R/R \leq \pm 1\%$
Load Life	Rated power load 90min ON, 30min OFF 70°C for 1000 hours	$\Delta R/R \leq \pm 2\%$
Load Life in Humidity	Rated power load 90min ON, 30min OFF 40°C, 95% R.H. for 500 hours	$\Delta R/R \leq \pm 2\%$

Reference Standard: IEC 60115-1, JIS C 5201-1

Meritek Resistor Series: <http://www.meritekusa.com/EN/productlist/node/2>

Meritek Product Series: <http://www.meritekusa.com/EN/products>

\*Specifications subject to change without notice.