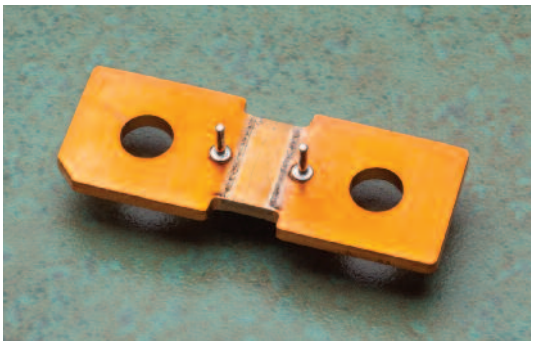
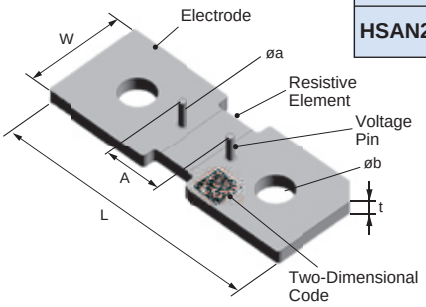


features

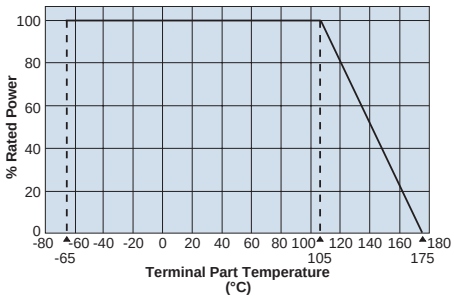
- Ultra low resistance, suitable for large current sensing
- Excellent T.C.R. achieved (50±25 x 10^{-6}/K)
- Correct electric current detection by a voltage pin is possible
- Bus bar and cable can be screwed on
- 2D code means individual resistance information
- Products meet EU RoHS requirements
- AEC-Q200 Tested

dimensions and construction*1

Type (Inch Size Code)	Resistance (Ω)	Dimensions inches (mm) L	W	A	øa	øb	t	Weight (g) (1pcs)
HSAN2P4022M5	50µ	1.57±.010 (40.0±0.25)	.866±.010 (22.0±0.25)	.335±.008 (8.5±0.2)	.039±.008 (1.0±0.2)	.213±.004 (5.4±0.1)	.079±.008 (2.0±0.2)	15
HSAN2P8022M8		3.15±.010 (80.0±0.25)				.327±.004 (8.3±0.1)		30
HSAN2P4015M5	100µ	1.57±.010 (40.0±0.25)	.591±.010 (15.0±0.25)	.335±.008 (8.5±0.2)	.039±.008 (1.0±0.2)	.213±.004 (5.4±0.1)	.079±.008 (2.0±0.2)	10
HSBN2P8018M8		3.15±.010 (80.0±0.25)	.709±.010 (18.0±0.25)	.472±.008 (12.0±0.2)		.327±.004 (8.3±0.1)		25
HSAN2P4015M5	200µ	1.57±.010 (40.0±0.25)	.591±.010 (15.0±0.25)	.335±.008 (8.5±0.2)	.039±.008 (1.0±0.2)	.213±.004 (5.4±0.1)	.039±.008 (1.0±0.2)	5



Derating Curve



For resistors operated terminal temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve above.

Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

ordering information

HS	A	N	2P	4015
Type	Size	Surface Condition	Number of Voltage Pin	Outward Form Size
HS	A: 5mm B: 8.2mm	N: Pure Copper	0P: 0 pin 2P: 2 pin *1	4022: 50µΩ 8022: 50µΩ 4015: 100µΩ 200µΩ 8018: 100µΩ Length x Width

M5	PT	L10	J	Y
Fastening Hole	Packing Form	Nominal Resistance	Resistance Tolerance	2D Code
M5: M5 Hole M8: M8 Hole *1	PT: Tray	50U: 50µΩ L10: 100µΩ L20: 200µΩ	J: ±5%	Nil: Non code Y: With Resistance Value

See Appendix C

*1 Voltage pin: ø1mm, length 4mm, Sn plating. Contact KOA factory for custom type request

Contact KOA factory when you have control request for environmental hazardous material other than the substance specified by EU RoHS

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use. 11/09/22

applications and ratings

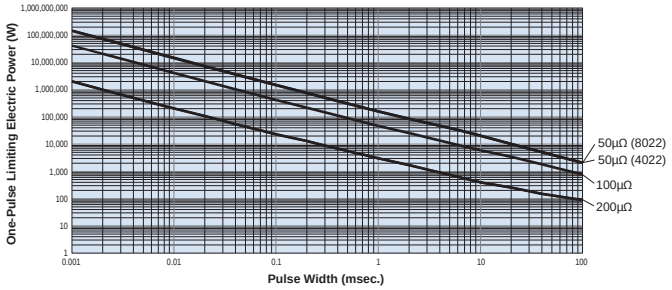
Part Designation	Power Rating*2	T.C.R. (X 10^{-6}/K)	Resistance Range (Ω)	Rated Terminal Part Temp.	Operating Temp. Range
HS	50W (1000A)	75±50	50μ	105°C	-65°C to +175°C
	36W (600A)	50±25	100μ		
	18W (300A)		200μ		

*2 A power rating shall be guaranteed with a method shown in the item (: Performance)

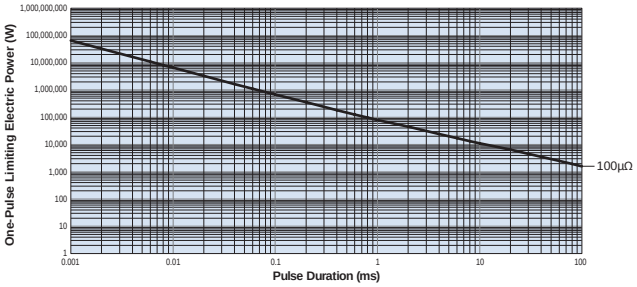
environmental applications

One-Pulse Limiting Electric Power

HSA



HSB

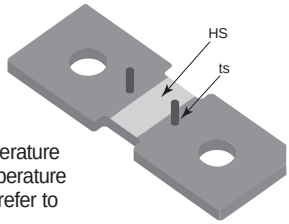


Please ask us about the resistance characteristic of continuous applied pulse.
The pulse endurance values are not assured values,so be sure to check the products on actual equipment when you use them.

Thermal Resistance

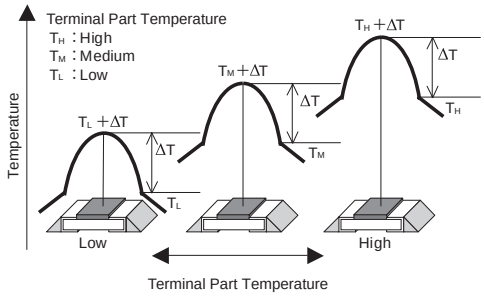
Resistance (Ω)	Rth (°C/W)
50μ	0.57
100μ	1.2
200μ	2.3

Rth=(Hs-ts)/Power



Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions. Please refer to us before use.

The temperature of the resistor will increase the same ⊿T from the standard terminal part temperature regardlless of the ambient temperature when the same power is applied. This is because there is hardly any heat dissipation from the resistor surface to the ambient air.



Performance Characteristics

Parameter	Requirement Δ R % Limit	Requirement Δ R % Typical	Test Method
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	50μΩ: +25°C/+125°C; 100μΩ, 200μΩ: +25°C/+100°C
Rapid Change of Temperature	±0.5	-0.1	-55°C (30 minutes), +150°C (30 minutes), 1000 cycles
Endurance at 105°C and Less of Terminal Part Temperature	±1	-0.1	Terminal part temperature: 105°C ± 3°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Low Temperature Exposure	±0.5	-0.05	-65°C, 1000 hours
High Temperature Exposure	±1	-0.4	175°C, 1000 hours

Additional environmental applications can also be found at www.koaspeer.com

11/09/22