

OAS - Series

Power Wire - Wound Resistor

FEATURES

- Resistance from 0,02Ω
- Temperature Coefficients to ±20ppm/°C
- Resistance Tolerances to ±0,01%
- Power Rating to 15Watt, Compact Design
- Working Temperature to 350°C
- Good Pulse Handling Capabilities
- Non-Inductive Windings (Option)
- RoHS - compliant



RATED VALUES (IEC 60115-1)

Resistance Range	Ω	0,02Ω to 260KΩ
Resistance Tolerance	%	Depending on needed power, from 0,02% to 1,0%
Temperature Coefficient	ppm/°C	
Operating Voltage (U_{max})	V	$\sqrt{(P \times R)}$ or max. Voltage, see following table
Insulation Resistance (R_{ins})	Ω	1G
Operating Temperature Range (T)	°C	55°C to 250°C

Type	U_{max} (V)	Power P ₂₅ (W)	Power P ₇₀ (W)	Tolerance- /Resistance Range ¹		
				±1,0% / Ω	±0,5% / Ω	±0,1% / Ω
OAS010	33	1	0,8	0R05 - 3K400	0R50 - 3K40	1R00 - 3K400
OAS015	42	1,5	1,2	0R05 - 7K500	0R50 - 7K500	1R00 - 7K500
OAS020	80	2	1,6	0R03 - 10K00	0R50 - 10K00	1R00 - 10K00
OAS030	135	3	2,4	0R03 - 12K50	0R30 - 12K50	1R00 - 12K50
OAS040	162	4	3,2	0R02 - 25K00	0R30 - 25K00	1R00 - 25K00
OAS050	194	5	4	0R02 - 32K00	0R30 - 32K00	1R00 - 32K00
OAS060	258	6	4,8	0R02 - 50K00	0R30 - 50K00	1R00 - 50K00
OAS070	425	7	5,6	0R02 - 95K00	0R30 - 95K00	1R00 - 95K00
OAS100	607	10	8	0R02 - 150K0	0R30 - 150K0	1R00 - 150K0
OAS150	1050	15	12	0R02 - 260K0	0R30 - 260K0	1R00 - 260K0

Resistance tolerances less than ±0,1%, depending on material availability, upon request.

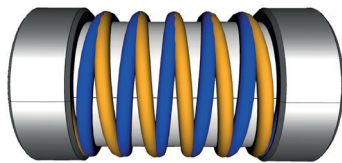
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CONSTRUCTION

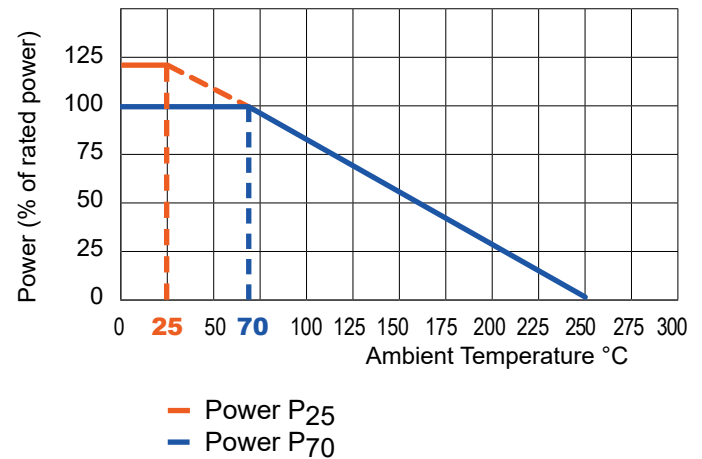
Resistance Material	Wire, Special Alloy
Winding	Wire Windings on Ceramics
Coating	Silicone
Lead Wires	Tin Plated Copper Wire
Marking	Lacquer, solvent-resistant

INDUCTANCE- REDUCED VERSION



Ayrton - Perry Winding, Option „N“
(Reduces the max. resistance value by half)

POWER DERATING CURVE



PERFORMANCE

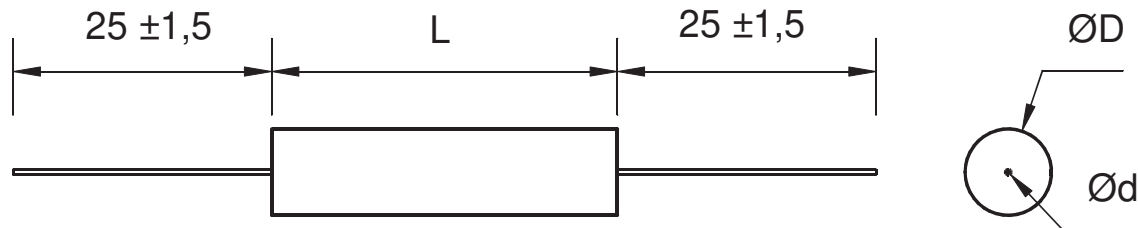
IEC 60115-1	Test	Conditions of Test	Specification ΔR
4.23	Moisture Resistance	+85°C, 85% R.H., Rated Voltage, 1000h	$\pm(0,2\% R + 0,05\Omega)$
4.19	Thermal Shock	-55°C 15 Minutes, +150°C 15 Minutes, 5 Cycles	$\pm(0,2\% R + 0,01\Omega)$
4.6	Dielectric Strength	U_{ins} 500V for OAS010/015/020; other 1000V for 1 Minute	10G Ω
4.13	Short Time Overload	5x Rated Voltage U_{max} , 5s	$\pm(0,2\% R + 0,01\Omega)$
4.25	Endurance	+70°C, U_{max} 1,5h „ON“ and 0,5h „OFF“, 1000	$\pm(1,0\% R + 0,05\Omega)$
4.22	Vibration	Frequency 10Hz to 500Hz, in x,y,z Direction	$\pm(0,1\% R + 0,05\Omega)$
4.16	Shock	5 Impulses at 100g for 5ms	$\pm(0,1\% R + 0,05\Omega)$
4.18	Soldering Resistance	260°C, max. 5s	$\pm(0,1\% R + 0,01\Omega)$

Measuring distance 9,5 mm from the end of the body.

OPTIONS

Inductance - reduced Version (N)	Nominal Resistance Value x 0,5
4 - Terminal (Kelvin) Connector (K)	Depending on Type and Resistance Value on Request
Special Lead Wires	E.g. for Spot Welding, on Request
Resistor - Sets	Matching (Selection) of Resistors by Equal TCR and Tolerance
Taping (G)	OAS010 - OAS030 = 2000pcs.; OAS040 - OAS050 = 1500pcs.; OAS060 - OAS100 = 1000pcs.; OAS150 = 750pcs.

DIMENSIONS



	D	L	d
OAS010	$2,2 \pm 0,8$	$6,5 \pm 1,5$	$0,511 \pm 0,05$
OAS015	$2,0 \pm 0,8$	$8,0 \pm 1,5$	$0,511 \pm 0,05$
OAS020	$2,5 \pm 0,8$	$10,5 \pm 1,5$	$0,511 \pm 0,05$
OAS030	$4,0 \pm 0,8$	$9,0 \pm 1,5$	$0,813 \pm 0,05$
OAS040	$4,5 \pm 0,8$	$14,5 \pm 1,5$	$0,813 \pm 0,05$
OAS050	$6,5 \pm 0,8$	$13,0 \pm 1,5$	$1,02 \pm 0,05$
OAS060	$6,5 \pm 0,8$	$16,0 \pm 1,5$	$1,02 \pm 0,05$
OAS070	$8,0 \pm 0,8$	$22,5 \pm 1,5$	$1,02 \pm 0,05$
OAS100	$8,0 \pm 0,8$	$31,0 \pm 1,5$	$1,02 \pm 0,05$
OAS150	$9,5 \pm 0,8$	$45,2 \pm 1,5$	$1,02 \pm 0,05$
All Dimension in mm			

- Note: Resistors of a closer precision range (resistance tolerance $< 0.1\%$ in combination with resistance values $\leq 1\Omega$) should be hand-soldered by trained personnel, otherwise a change of nominal values (drift) can occur.

ORDERING INFORMATION

OAS010 100R00 0,1% TK20 (OAS010 100R00; $\pm 0,1\%$; $\pm 20\text{ppm}^\circ\text{C}$)

Type	Special	Resistance Value	Tolerance	Temperature Coefficient	Power	Options	Packaging
OAS010	- XXX	0R1000 100R00 10K000	0,02% 0,05% 0,1% 0,25% 0,5% 1,0%	TK20 TK50 TK90	- Standard	- N K	- G

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