

OPEN-AIR LOW VALUE CURRENT SHUNT RESISTORS

0.001Ω to 0.15Ω, 1 WATT to 5 WATT

OA SERIES



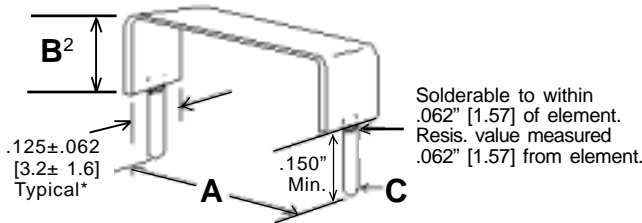
RESISTORS • CAPACITORS • COILS • DELAY LINES



← New narrow profile design offers significant space savings!

- Industry's widest range and lowest cost!
- Tolerances to ±0.5%, TC's to ±20ppm
- Available on exclusive **SWIFT™** delivery program!
- Option S: Axial lead (unformed element)
- Option E: Low Thermal EMF
- Option A: Stand-offs formed into lead wires
- Optional pin diameters and pin spacing

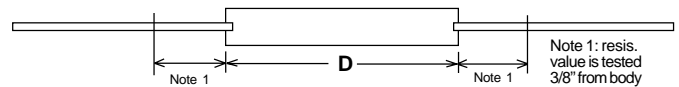
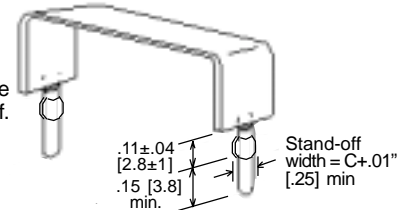
RCD's OA series offers cost-effective performance for a wide range of current shunt/sense applications. The non-insulated open-air design features non-inductive performance and excellent stability/overload capacity. Numerous design modifications and custom styles are available... current ratings up to 100A, surface mount designs, military screening/burn-in, marking, insulation, intermediate values, etc. Custom shunts have been an RCD specialty over 30 years! Contact factory for assistance.



Typical shape depicted--actual shape may vary within envelope given. Overall length not to exceed Dim.A +.12" [3]. Dimensions in inches [mm].
* Most values are .125 [3.2] wide, lowest 2W-5W are .187 [4.75] wide, highest 1W-2W values are .062 [1.6] wide

Option 'A' Stand-offs:

For stand-off, specify Opt. A (e.g. OA2BA, OA5AA). Resis. value is measured at bottom of stand-off.



Option 'S' Straight Axial Lead Design (lead length = 1.25" [31.8] min)

SPECIFICATIONS

RCD Type	Power Rating ¹	Current Rating ¹		Resistance Range	A (lead spacing) ±.040 [1]		B Max. ²	C (lead diameter)		D Max.
		With Std. Lead	With Opt. Lead		Standard	Optional ²		Standard	Optional	
OA1A	1W	14A	17A	.001Ω-.08Ω	.40 [10.5]	.2" [5], .275" [7]	.35 [8.9] ²	20AWG	18AWG (Opt. 18)	1.20 [30.5]
OA1B	1W	17A	14A	.001Ω-.08Ω	.45 [11.4]	.2" [5], .275" [7]	.30 [7.6] ²	18AWG	20AWG (Opt. 20)	1.20 [30.5]
OA2A	2W	22A	24A	.001Ω-.1Ω	.40 [10.5]	.2" [5], .275" [7]	.70 [17.8] ²	20AWG	18AWG (Opt. 18)	1.95 [49.5]
OA2B	2W	24A	22A	.001Ω-.1Ω	.60 [15.2]	.2" [5], .275" [7]	.60 [15.2] ²	18AWG	20AWG (Opt. 20)	1.95 [49.5]
OA3A	3W	26A	24A	.001Ω-.12Ω	.60 [15.2]	.2" [5], .275" [7]	.90 [22.9] ²	18AWG	20AWG (Opt. 20)	2.50 [63.5]
OA5A	5W	32A	40A	.0025Ω-.15Ω	.80 [20.3]	.2" [5], .275" [7]	1.0 [25.4] ²	18AWG	16AWG (Opt. 16)	2.94 [74.7]

¹Units not to exceed wattage or current rating, whichever is less. Current rating is based on standard lead diameter, increased ratings available.
²Dim.B applies only to parts formed to the standard lead spacing (increase accordingly for options 80 & 27). Custom pin spacings are available.

STANDARD RESISTANCE VALUES AND CODES

Intermediate values available, most popular values listed in bold:
.001Ω (R001), .0015Ω (R0015), .002Ω (R002), .0025Ω (R0025), .003Ω (R003), **.005Ω** (R005), .0068Ω (R0068), .0075Ω (R0075), .0082Ω (R0082), **.01Ω** (R010 if ≤1%, R01 ≥2%), .012Ω (R012), **.015Ω** (R015), **.02Ω** (R020 if ≤1%, R02 ≥2%), .022Ω (R022), **.025Ω** (R025), **.03Ω** (R030 if ≤1%, R03 ≥2%), .033Ω (R033), **.04Ω** (R040 if ≤1%, R04 ≥2%), **.05Ω** (R050 ≤1%, R05 ≥2%), .068Ω (R068), **.07Ω** (R070 if ≤1%, R07 ≥2%), .075Ω (R075), **.08Ω** (R080 if ≤1%, R08 ≥2%), **.1Ω** (R100 if ≤1%, R10 ≥2%).

TYPICAL OPERATING CHARACTERISTICS:

TEMPERATURE RANGE: -55 to +275°C
DERATING: derate power & current rating by 0.4%/°C above 25°C
OVERLOAD: 5 x rated power for 5 seconds
LOAD LIFE @ 25°C (1000 hrs): 1% ΔR
MOISTURE No Load (1000 hrs): 1% ΔR
INDUCTANCE: <10nH
TEMP. CYCLING -40°C to +125°C (1000 cycles): 1% ΔR

TOLERANCE AND T.C. OPTIONS

Resistance Range	Tol. Range	Temp. Coef. (ppm/°C)	
		Typical	Best Avail.*
.001 to .0049Ω (OA5A=.0025 to .005Ω)	3% to 10%	900ppm	200ppm
.005 to .0099Ω (OA5A=.006 to .015Ω)	1% to 10%	600ppm	100ppm
.010 to .024Ω (OA5A=.016 to .025Ω)	1% to 10%	200ppm	50ppm
.025 to .049Ω	1% to 10%	100ppm	30ppm
.05 to .10Ω	1% to 10%	50ppm	20ppm

* TC options vary depending on size and value (consult factory for availability)

P/N DESIGNATION: OA2A □ □ □ - R001 - J B □ W

RCD Type _____
Design Options: S=unformed, E= low thermal EMF, A=standoffs. Leave blank if std.
Lead Spacing Option: 80=.2" [5mm], 27=.275" [7mm]. Leave blank if std.
Lead Diameter Option: 20=20AWG, 18=18AWG, 16=16AWG. Leave blank if standard.
Resis. Code (see table): R01, R010, R100, etc.
Tolerance Code: D=0.5%, F=1%, G=2%, H=3%, J=5%, K=10%
Packaging: B = bulk (standard)
TC (see table for options): 20=20ppm, 30=30ppm, 50=50ppm, 101=100ppm, 201=200ppm, 301=300ppm. (leave blank if standard)
Termination: W=Lead-free, Q=Tin/Lead (leave blank if either is acceptable)