



Resistor Networks

4100R Series 4116R

Thick Film Molded DIPs

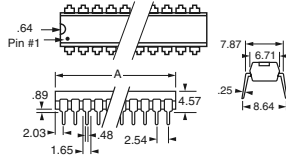
• Compatible with automatic insertion equipment • Copper leads for excellent heat dissipation • High temperature lead attachment to withstand reflow solder temperatures up to 260°C • Trifurcated Krimp-Joint™ lead attachment for product reliability and strength

Electrical Characteristics:
• Maximum Operating Voltage: 100V • Temperature Coefficient of Resistance: 50Ω to 2.2MΩ: ±100ppm/°C, below 50Ω: ±250ppm/°C • Operating Temperature: -55°C - 125°C

Environmental Characteristics:
• Insulation Resistance: 10,000MΩ minimum • Dielectric Withstanding Voltage: 200 VRMS • Lead Solderability/Solvent Resistance: Meet requirements of MIL-R-83401

Physical Characteristics:
• Flammability: Conforms to UL94V-0 • Lead Frame Material: Copper (OLIN 194) 90/10 electroplate • Body Material: Novolac Epoxy

Resistance Tolerance:
• Isolated/Bussed: Below 50Ω ±1%; Above 50Ω ±2%
• Dual Terminated: Below 100Ω ±2%; Above 100Ω ±2%



All values listed in Ω Resistance Values (001 and 002) Isolated and Bussed Circuits

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
22 (220)	220 (221)	2K (202)	18K (183)	150K (154)
27 (270)	270 (271)	2.2K (222)	20K (203)	180K (184)
33 (330)	330 (331)	2.7K (272)	22K (223)	220K (224)
39 (390)	390 (391)	3.3K (332)	27K (273)	270K (274)
47 (470)	470 (471)	3.9K (392)	33K (333)	330K (334)
56 (560)	560 (561)	4.7K (472)	39K (393)	390K (394)
68 (680)	680 (681)	5.6K (562)	47K (473)	470K (474)
82 (820)	820 (821)	6.8K (682)	56K (563)	560K (564)
100 (101)	1K (102)	8.2K (822)	68K (683)	680K (684)
120 (121)	1.2K (122)	10K (103)	82K (823)	820K (824)
150 (151)	1.5K (152)	12K (123)	100K (104)	1M (105)
180 (181)	1.8K (182)	15K (153)	120K (124)	

4800P Series 4816P

Thick Film Surface Mount Medium Body (5.59mm)

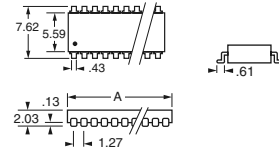
• Standard E.I.A. (S0GN-0002) package compatible with automatic placement equipment • High temperature lead attachment to withstand reflow temperatures up to 260°C.

Electrical Characteristics:
• Maximum Operating Voltage: 50V • Temperature Coefficient of Resistance: 50Ω and above: ±100ppm/°C, below 50Ω: ±250ppm/°C • Operating Temperature: -55°C - 125°C

Environmental Characteristics:
• Insulation Resistance: 10,000MΩ minimum • Dielectric Withstanding Voltage: 200 VRMS • Lead Solderability/Solvent Resistance: Meet requirements of MIL-R-83401

Physical Characteristics:
• Flammability: Conforms to UL94V-0 • Lead Frame Material: Copper (OLIN 194) 60/40 solder dip • Body Material: Novolac Epoxy

Resistance Tolerance:
• Isolated/Bussed: Below 50Ω ±1%; Above 50Ω ±2%
• Dual Terminated: Below 100Ω ±2%; Above 100Ω ±2%



Resistance Values (003) Dual Terminator Circuits

Value (Code)
180/390 (181/391)
220/270 (221/271)
220/390 (221/391)
330/390 (331/391)
330/470 (331/471)
3K/6.2K (302/622)

4300R Series 4306R, 4308R and 4310R

Thick Film Molded SIPs, Low Profile

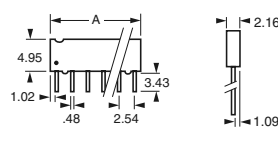
• Low profile provides compatibility with DIPs • Compatible with automatic insertion equipment • High temperature lead attachment to withstand reflow temperatures up to 260°C • Copper leads for excellent heat dissipation

Electrical Characteristics:
• Maximum Operating Voltage: 100V • Temperature Coefficient of Resistance: 50Ω to 2.2MΩ: ±100ppm/°C, below 50Ω: ±250ppm/°C • Operating Temperature: -55°C - 125°C • Power Rating: Derate to zero power from 70°C - 125°C

Environmental Characteristics:
• Insulation Resistance: 10,000MΩ minimum • Dielectric Withstanding Voltage: 200 VRMS • Lead Solderability/Solvent Resistance: Meet requirements of MIL-R-83401

Physical Characteristics:
• Flammability: Conforms to UL94V-0 • Lead Frame Material: Copper (OLIN 194) 90/10 plated • Body Material: Novolac Epoxy

Resistance Tolerance:
• Isolated/Bussed: Below 50Ω ±1%; Above 50Ω ±2%
• Dual Terminated: Below 100Ω ±2%; Above 100Ω ±2%



All values listed in Ω Resistance Values (001 and 002) Isolated and Bussed Circuits

Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
22 (220)	220 (221)	2K (202)	18K (183)	150K (154)
27 (270)	270 (271)	2.2K (222)	20K (203)	180K (184)
33 (330)	330 (331)	2.7K (272)	22K (223)	220K (224)
39 (390)	390 (391)	3.3K (332)	27K (273)	270K (274)
47 (470)	470 (471)	3.9K (392)	33K (333)	330K (334)
56 (560)	560 (561)	4.7K (472)	39K (393)	390K (394)
68 (680)	680 (681)	5.6K (562)	47K (473)	470K (474)
82 (820)	820 (821)	6.8K (682)	56K (563)	560K (564)
100 (101)	1K (102)	8.2K (822)	68K (683)	680K (684)
120 (121)	1.2K (122)	10K (103)	82K (823)	820K (824)
150 (151)	1.5K (152)	12K (123)	100K (104)	1M (105)
180 (181)	1.8K (182)	15K (153)	120K (124)	

4600X Series 4606X, 4608X and 4610X

Thick Film Conformal SIPs, Low Profile

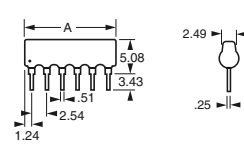
• Low Profile is compatible with DIPs • High temperature lead attachment to withstand reflow temperatures up to 260°C

Electrical Characteristics:
• Maximum Operating Voltage: 100V • Temperature Coefficient of Resistance: 50Ω to 2.2MΩ: ±100ppm/°C, below 50Ω: ±250ppm/°C • Operating Temperature: -55°C - 125°C

Environmental Characteristics:
• Insulation Resistance: 10,000MΩ minimum • Dielectric Withstanding Voltage: 200 VRMS • Lead Solderability/Solvent Resistance: Meet requirements of MIL-R-83401

Physical Characteristics:
• Flammability: Conforms to UL94V-0 • Lead Frame Material: Copper (OLIN 194) 60/40 solder dip • Body Material: Epoxy resin/anhydride diphenol A

Resistance Tolerance:
• Isolated/Bussed: Below 50Ω ±1%; Above 50Ω ±2%
• Dual Terminated: Below 100Ω ±2%; Above 100Ω ±2%



Resistance Values (004) Dual Terminator Circuits

Value (Code)
160/240 (161/241)
180/390 (181/391)
220/270 (221/271)
220/390 (221/391)
330/390 (331/391)
330/470 (331/471)
3K/6.2K (302/622)

Fig. 1 - Isolated

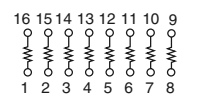


Fig. 2 - Bussed

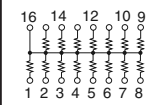


Fig. 3 - Dual Term

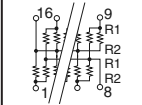


Fig. 4 - Dual Term

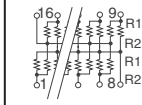


Fig. 5 - Isolated

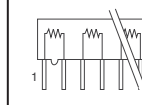


Fig. 6 - Bussed

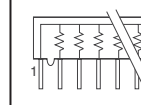
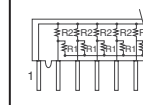


Fig. 7 - Dual Term



Series	Fig.	No. of Pins	No. of Res.	Dimension A (mm)	Element Power Rating (W @ 70°C)	Digi-Key Part No.†	1	10	50	Pricing 100	500	1,000
4100	1	16	8	21.97	.25	4116R-1-(Code)-ND♦	.60	5.27	22.10	37.78	157.41	264.00
	2	16	15	21.97	.125	4116R-2-(Code)-ND♦	.60	5.27	22.10	37.78	157.41	264.00
	3	16	28	21.97	.125	4116R-3-(Code)/(Code)-ND★	1.27	11.28	47.32	80.89	337.04	566.00
4300	6	6	5	14.83	.20	4306R-1-(Code)-ND♦	.47	4.19	17.55	30.00	125.00	210.00
	5	6	3	14.83	.30	4306R-2-(Code)-ND♦	.47	4.19	17.55	30.00	125.00	210.00
	7	6	8	14.83	.20	4306R-4-(Code)/(Code)-ND★	.67	5.89	24.70	42.22	175.93	296.00
	6	8	7	19.91	.20	4308R-1-(Code)-ND♦	.54	4.81	20.15	34.44	143.52	241.00
	5	8	4	19.91	.30	4308R-2-(Code)-ND♦	.54	4.81	20.15	34.44	143.52	241.00
	7	8	12	19.91	.20	4308R-4-(Code)/(Code)-ND★	.74	6.51	27.30	46.67	194.44	327.00
4600	6	10	9	24.99	.20	4310R-1-(Code)-ND♦	.65	5.74	24.05	41.11	171.30	288.00
	5	10	5	24.99	.30	4310R-2-(Code)-ND♦	.65	5.74	24.05	41.11	171.30	288.00
	7	10	16	24.99	.20	4310R-4-(Code)/(Code)-ND★	.88	7.75	32.50	55.56	231.48	389.00
	6	6	5	15.19	.20	4606X-1-(Code)-ND♦	.25	2.23	9.36	16.00	66.67	112.00
	5	6	3	15.19	.30	4606X-2-(Code)-ND♦	.25	2.23	9.36	16.00	66.67	112.00
	7	6	8	15.19	.20	4606X-4-(Code)/(Code)-ND★	.53	4.65	19.50	33.33	138.89	233.00
	6	8	7	20.27	.20	4608X-1-(Code)-ND♦	.32	2.79	11.70	20.00	83.33	140.00
5	8	4	20.27	.30	4608X-2-(Code)-ND♦	.32	2.79	11.70	20.00	83.33	140.00	
7	8	12	20.27	.20	4608X-4-(Code)/(Code)-ND★	.63	5.58	23.40	40.00	166.67	280.00	
4800	6	10	9	25.35	.20	4610X-1-(Code)-ND♦	.39	3.41	14.30	24.44	101.85	171.00
	5	10	5	25.35	.30	4610X-2-(Code)-ND♦	.39	3.41	14.30	24.44	101.85	171.00
	7	10	16	25.35	.20	4610X-4-(Code)/(Code)-ND★	.70	6.20	26.00	44.44	185.19	311.00
	1	16	8	12.45	.160	4816P-1-(Code)-ND♦	1.12	9.92	41.60	71.00	300.00	500.00
2	16	15	12.45	.080	4816P-2-(Code)-ND♦	1.12	9.92	41.60	71.00	300.00	500.00	
4	16	28	12.45	.080	4816P-3-(Code)/(Code)-ND★	1.75	15.50	65.00	110.94	468.75	781.00	

† For complete part number, substitute the corresponding resistance code (listed above) for Value ♦ For RoHS Compliant Part Number change -ND to LF-ND ★ For RoHS Compliant Part Number change -ND to L-ND Not all values listed are available as RoHS Compliant

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