

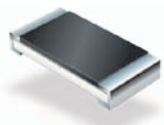
# Bourns® Fixed Resistors Product Summary

Type	Function	Features	Power Rating of Largest Package (W)	Industry Packages or Length x Width (mm)	Absolute Tolerance Per Resistor	Resistance Range (Ohms)	Temperature Coefficient Values* (PPM)	Models
SMT Resistor Arrays	General	Industry Standard	0.5	Concave or Convex 2 Pin to 16 Pin	1 %, 5 %	10 - 1 M	200	CAT10, CAT16, CAY10, CAY16
SMT Thick Film Chip Resistors	General	Industry Standard	1	0201 - 2512	1 %, 5 %	1 - 10 M	200	CR Series
Resistor Networks	General	Industry Standard	2.8	Through-hole SIL, SMT	0.5 %, 1 %, 2 %, 5 %	10 - 10 M	25 - 200	4100, 4300, 4400, 4600, 4800 Series
SMT Thick Film Low Ohmic	Current Sense	Industry Standard	1	0603 - 2512	1 %, 5 %	0.02 - 9.1	200 - 600	CRL Series
SMT Metal Strip Chip Resistors	Current Sense	High Power, Low TCR	3	2010 - 2512	1 %, 5 %	0.001 - 0.1	75 - 200	CRA, CRF Series
SMT Thick Film Power Resistors	Current Sense & Voltage Sense	High Power, High Pulse Voltage Rating	2	0805 - 2512	1 %, 5 %	0.047 - 1 M	100 - 200	CRM Series
SMT Thin Film Chip Resistors	Precision Voltage Sense	Precision, Low TCR	0.25	0402-1206	0.01 %, 0.05 %, 0.1 %, 1 %	1.0 - 1 M	5 - 50	CRT Series
SMT Wirewound Resistors	Surge Protection	High Pulse Power	3	4.8 x 3.3 - 15.9 x 6.9	0.5 %, 1 %, 5 %	0.01 - 25 K	20 - 150	PWR1913, PWR2010, PWR2615, PWR3014-6327
Axial Leaded Wirewound Safety Resistors	Safety in AC Power	Opens Safely in 240/220 Mains	3	11.5 x 5.5	5 %	8.4 - 2.4 K	90	PWR4522
Thick Film High Power Resistors	Current Sense, Cap Discharge	High Pulse Power	35	TO220, D2PAK, DPAK	1 %, 5 %	0.02 - 130 K	100	PWR163, PWR263, PWR220T, PWR221T
Open Air Shunt Resistors	Current Sense	High Current, High Temperature	1, 3, 5	Through-hole	1 %, 5 %	0.005 - 0.1	20 - 900	PWR4412, PWR4413
High Power Shunt Resistors	Current Sense	Low Ohmic, High Stability	15	TO220, D2PAK	0.5 %, 1 %, 2 %, 5 %	0.002 - 50.0	15 - 50	PWR220-2S, PWR220-4S, PWR221-2S, PWR221-4S
High Power Terminations	Terminators, Combiners, Isolators, Dividers	Excellent VSWR, High Power	Up to 1K	Industry Standard	5 %	12.5, 50, 100, 200	200	CHF Series

\*Per Resistor, Resistance Value Dependent



SMT Resistor Arrays



SMT Thick Film Chip Resistors



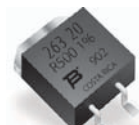
Resistor Networks



SMT Wirewound Resistors



Axial Leaded Wirewound Safety Resistors



Thick Film High Power Resistors



Open Air Shunt Resistors



Thick Film High Power Resistors



High Power Terminations

Applications	Maximum Voltage (V)	Peak Soldering Temperature (°C)	Design Kit Part Number	Packaging	RoHS	Models
Consumer, White Goods, Industrial, Telecom, Medical†	50	260	N/A	CAT10, CAY10: Reel of 10K pcs. CAT16, CAY16, CAY17: Reels of 5K pcs. CAT25, CAY16-F8, CAY16-J8, CAT16-J8, CAT16-F8: 4K pcs.	Y	CAT10, CAT16, CAY10, CAY16
Consumer, White Goods, Industrial, Telecom, Medical†	200	260	N/A	CR0201: Reel of 20K pcs., CR0402: Reel of 10K pcs. CR0805-CR1206: Reels of 5K pcs. CR2010-CR2512: Reels of 4K pcs.	Y	CR Series
Industrial, Telecom, Medical†	100	260*	N/A	4100: Tubes of Between 20 and 45 pcs. 4300: Tubes of Between 35 pcs. and 250 pcs. 4400: Tubes of 40-50 pcs. or Reels of 1.5K pcs. 4600: Bags of 100 pcs. or Ammopak of 1K pcs.	Y**	4100, 4300, 4400, 4600, 4800 Series
Consumer, White Goods, Industrial, Telecom, Medical†, Power Supplies	√(P*R)	260	N/A	CRL0603-CRL1206: Reels of 5K pcs. CRL2010-CRL2512: Reels of 4K pcs.	Y	CRL Series
Consumer, White Goods, Industrial, Telecom, Medical†, Power Supplies	√(P*R)	260	CRA2512-LAB1, CRF2512-LAB1	CRA2512, CRF2512, CRA2010: Reels of 4K pcs. CRF1206: Reels of 5K pcs.	Y	CRA, CRF Series
Consumer, White Goods, Industrial, Telecom, Medical†, Power Supplies, Ports	300	260	CRM2512-LAB1, CRM2512-LAB2, CRM Series-LAB1	CRM0603 - CRM1206: Reels of 5K pcs. CRM2010 - CRM2512: Reels of 4K pcs.	Y	CRM Series
Consumer, White Goods, Industrial, Telecom, Medical†, Power Supplies, Ports	150	260	N/A	CRT0402: Reels of 10K pcs. CRT0603 - CRT1206: Reels of 5K pcs.	Y	CRT Series
Consumer, White Goods, Industrial, Telecom, Medical†, Power Supplies, Ports, Surge Modules	√(P*R)	260	PWRSMD-LAB	PWR1913: Reels of 3K pcs. or Bag of 250 pcs. PWR2010: Reels of 2K pcs. or Bag of 200 pcs. PWR2615: Reels of 2K pcs. or Bag of 250 pcs. PWR3014: Reels of 1.5K pcs. or Bag of 200 pcs. PWR4318: Reels of 1.5K pcs. or Bag of 100 pcs. PWR4525: Reels of 1.5K pcs. or Bag of 250 pcs. PWR5322: Reels of 1.5K pcs. or Bag of 100 pcs. PWR6327: Reels of 700 pcs. or Bag of 250 pcs.	Y	PWR1913, PWR2010, PWR2615, PWR3014-6327
220/240 Mains, Power Supplies, White Goods	√(P*R)	260	N/A	Ammopak of 1.5K pcs.	Y	PWR4522
Industrial, Telecom, Rail, Automotive Power Supplies	250	260	PWR2635-20-LAB1	Tubes of 50 pcs. or Reels of 500 pcs. (SMT Only)	Y	PWR163, PWR263, PWR220T, PWR221T
Industrial, Telecom, High Power UHF, FM, GSM, UMTS Amplifiers	250	260	CHF-LAB1	Trays of Between 20 and 100 or Reels of 3K	Y	CHF Series
Industrial, Telecom, Medical†, Power Supplies	√(P*R)	260 (Wave)	PWR4412-LAB1	PWR4412 Bags of 250 pcs. PWR4412 Boxes of 500 pcs.	Y	PWR4412, PWR4413
Industrial, Rail, Instrumentation, Telecom, Medical†, Power Supplies	√(P*R)	245	N/A	Tubes of 50 pcs. Reels of 500 pcs. (SMT parts)	Y	PWR220-2S, PWR220-4S, PWR221-2S, PWR221-4S

† Bourns® products have not been specifically designed or tested for FDA Class III applications and their use in such applications is neither recommended nor supported.

\*4400, 4800: Reflow Soldering and 4100, 4300, 4600: Wave Soldering

\*\*Pb Plating Still Available on Models 4100, 4300, 4400, 4800

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