SMD Wire Wound Ceramic Chip Inductors - SCS Series

SCS Series



Due to technical expertise of accurately wounding skill, these chip inductors are designed as filtering, impedance matching, resonance and choke circuits for RF designer. The stand series as well as customer design to meet your needs of telecom & wireless products.

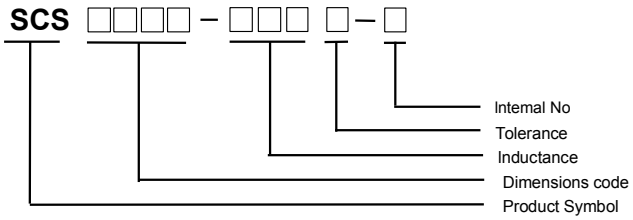
Features

- RoHS Compliant
- Ceramic body and wire wound construction provide high SRFs.
- These ultra – compact inductors provided exceptional Q values, even at high frequencies.
- Their ceramic construction delivers the highest possible SRFs as well as excellent Q values.
- The non-magnetic coil form also assures the utmost in thermal stability, predictability and batch consistency.
- SCS series is standard parts for RF designers.

Applications

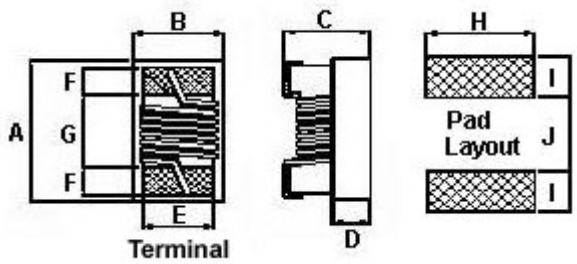
RF products for cellular phone, GPS receiver, Base Station, Repeater, Wireless LAN/ Mouse/ Keyboard/ earphone, remote control, security system and other RF modules.

Product Identification

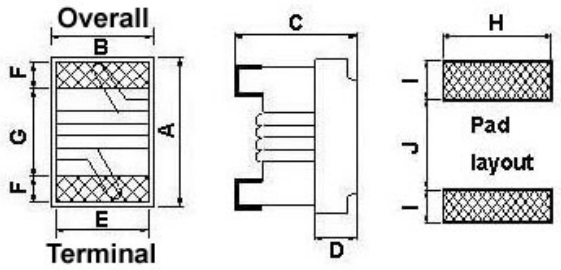


Shapes and Dimensions / Recommended Pattern

SCS0402



SCS0603/0805/1008



Dimensions

		A Max	B Max	C Max	D	E	F	G	H	I	J
SCS0402	inch	0.047	0.028	0.026	0.010	0.020	0.009	0.022	0.026	0.014	0.018
	mm	1.19	0.70	0.66	0.25	0.51	0.23	0.56	0.66	0.36	0.46
SCS0805	inch	0.093	0.068	0.06	0.028	0.050	0.020	0.040	0.070	0.040	0.030
	mm	2.35	1.73	1.52	0.71	1.27	0.51	1.02	1.78	1.02	0.76
SCS1008	inch	0.115	0.110	0.083	0.046	0.080	0.020	0.060	0.100	0.040	0.050
	mm	2.92	2.79	2.1	1.16	2.03	0.51	1.52	2.54	1.02	1.27

		A	B	C	D	E	F	G	H	I	J
SCS0603	mm	$1.6^{+0.2}_{-0.1}$	1.02±0.1	$0.82^{+0.2}_{-0.1}$	0.51	0.76	0.33	0.86	1.02	0.64	0.64

SMD Wire Wound Ceramic Chip Inductors - SCS Series

Electrical Characteristics

Part Number	Inductance (nH)	Tolerance (±%)	Q Min	900MHz		1.7GHz		SRF (GHz) Min	Rdc (Ω) Max	Irms (mA) Max
				L Typ	Q Typ	L Typ	Q Typ			
SCS0402-1N0□-S	1.0	10 / 5	16	1.02	77	1.02	69	12.70	0.045	1360
SCS0402-1N9□-S	1.9	10 / 5	16	1.72	68	1.74	82	11.30	0.070	1040
SCS0402-2N0□-S	2.0	10 / 5	16	1.93	54	1.93	75	11.10	0.070	1040
SCS0402-2N2□-S	2.2	10 / 5	19	2.19	59	2.23	100	10.80	0.070	960
SCS0402-2N4□-S	2.4	10 / 5	15	2.24	51	2.27	68	10.50	0.068	790
SCS0402-2N7□-S	2.7	10 / 5	16	2.58	42	2.60	61	10.40	0.120	640
SCS0402-3N3□-S	3.3	10 / 5	19	3.10	65	3.12	87	7.00	0.066	840
SCS0402-3N6□-S	3.6	10 / 5	19	3.56	45	3.62	71	6.80	0.066	840
SCS0402-3N9□-S	3.9	10 / 5	19	3.89	50	4.00	75	6.00	0.066	840
SCS0402-4N3□-S	4.3	10 / 5	18	4.19	47	4.30	71	6.00	0.091	700
SCS0402-4N7□-S	4.7	10 / 5	15	4.55	48	4.68	68	4.77	0.130	640
SCS0402-5N1□-S	5.1	10 / 5	20	5.15	56	5.25	82	4.80	0.083	800
SCS0402-5N6□-S	5.6	10 / 5	20	5.16	54	5.28	81	4.80	0.083	760
SCS0402-6N2□-S	6.2	10 / 5	20	6.16	52	6.37	76	4.80	0.083	760
SCS0402-6N8□-S	6.8	10 / 5	20	6.56	63	6.93	78	4.80	0.083	680
SCS0402-7N5□-S	7.5	10 / 5	22	7.91	60	8.22	88	4.80	0.10	680
SCS0402-8N2□-S	8.2	10 / 5	22	8.50	57	8.85	84	4.40	0.10	680
SCS0402-8N7□-S	8.7	10 / 5	18	8.78	54	9.21	73	4.10	0.20	480
SCS0402-9N0□-S	9.0	10 / 5	22	9.07	62	9.53	78	4.16	0.10	680
SCS0402-9N5□-S	9.5	10 / 5	18	9.42	54	9.98	69	4.00	0.20	480
SCS0402-10N□-S	10	10 / 5	21	9.8	50	10.10	67	3.90	0.20	480
SCS0402-11N□-S	11	10 / 5	24	10.7	52	11.20	78	3.68	0.12	640
SCS0402-12N□-S	12	10 / 5	24	11.9	53	12.70	71	3.60	0.12	640
SCS0402-13N□-S	13	10 / 5	24	13.4	51	14.63	57	3.45	0.21	440
SCS0402-15N□-S	15	10 / 5	24	14.6	55	15.50	77	3.28	0.17	560
SCS0402-16N□-S	16	10 / 5	24	16.6	46	18.86	47	3.10	0.22	560
SCS0402-18N□-S	18	10 / 5	25	18.3	57	20.28	62	3.10	0.23	420
SCS0402-19N□-S	19	10 / 5	24	19.1	50	21.10	67	3.04	0.20	480
SCS0402-20N□-S	20	10 / 5	25	20.7	52	23.66	53	3.00	0.25	420
SCS0402-22N□-S	22	10 / 5	25	23.2	53	26.75	53	2.80	0.30	400
SCS0402-23N□-S	23	10 / 5	22	23.8	49	26.90	64	2.72	0.30	400
SCS0402-24N□-S	24	10 / 5	25	25.1	51	29.50	50	2.70	0.30	400
SCS0402-27N□-S	27	10 / 5	24	28.7	49	33.50	63	2.48	0.30	400
SCS0402-30N□-S	30	10 / 5	25	31.1	46	38.50	39	2.35	0.35	400
SCS0402-33N□-S	33	10 / 5	24	34.9	31	41.74	32	2.35	0.40	400
SCS0402-36N□-S	36	10 / 5	24	39.5	44	48.40	53	2.32	0.44	320
SCS0402-39N□-S	39	10 / 5	25	41.7	47	50.23	45	2.10	0.55	200
SCS0402-40N□-S	40	10 / 5	24	39.0	44	47.40	33	2.24	0.65	320
SCS0402-43N□-S	43	10 / 5	25	45.8	46	61.55	34	2.03	0.81	100
SCS0402-47N□-S	47	10 / 5	20	50.0	38	-	-	2.10	0.83	150
SCS0402-51N□-S	51	10 / 5	25	56.6	40	-	-	1.75	0.82	100
SCS0402-56N□-S	56	10 / 5	22	62.8	42	-	-	1.76	0.97	100
SCS0402-68N□-S	68	10 / 5	22	78.2	36	-	-	1.62	1.12	100
SCS0402-82N□-S	82	10 / 5	20	-	-	-	-	1.26	1.55	50
SCS0402-R10□-S	100	10 / 5	20	-	-	-	-	1.16	2.00	30

- When ordering, please specify tolerance and packaging codes.
- Tolerance : J = ±5% , K = ±10%
- L , Q : Agilent/HP4291A+Agilent/HP16197A @250MHz
- SRF : Agilent/HP8753D / Agilent/HP8722ES
- Rdc : CH502BC/HP4338B
- Irms for a 15℃ rise above 25℃ ambient.

SMD Wire Wound Ceramic Chip Inductors – SCS Series

Electrical Characteristics

Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	SRF (MHz) Min	Rdc (Ω) Max	Irms (mA) Max	900 MHz		1.7 GHz	
								L Typ	Q Typ	L Typ	Q Typ
SCS0603-1N6□-S	1.6	250	10 / 5	24	12500	0.030	700	1.67	49	1.65	63
SCS0603-1N8□-S	1.8	250	10 / 5	16	12500	0.045	700	1.63	35	1.66	50
SCS0603-3N6□-S	3.6	250	10 / 5	22	5900	0.063	700	3.72	53	3.71	65
SCS0603-3N9□-S	3.9	250	10 / 5	22	6900	0.080	700	3.95	49	3.96	67
SCS0603-4N3□-S	4.3	250	10 / 5	22	5900	0.063	700	4.32	50	4.33	70
SCS0603-4N7□-S	4.7	250	10 / 5	20	5800	0.116	700	4.72	47	4.75	57
SCS0603-5N1□-S	5.1	250	10 / 5	20	5700	0.140	700	4.93	47	4.95	56
SCS0603-5N6□-S	5.6	250	10 / 5	20	5800	0.170	700	5.53	56	5.86	77
SCS0603-6N3□-S	6.3	250	10 / 5	20	5700	0.140	700	5.50	47	6.10	60
SCS0603-6N8□-S	6.8	250	10 / 5	27	5800	0.110	700	6.75	60	7.10	81
SCS0603-7N5□-S	7.5	250	10 / 5	28	4800	0.106	700	7.70	60	7.82	65
SCS0603-8N2□-S	8.2	250	10 / 5	28	4700	0.109	700	8.30	60	8.50	60
SCS0603-8N7□-S	8.7	250	10 / 5	28	4600	0.109	700	8.86	62	9.32	58
SCS0603-9N5□-S	9.5	250	10 / 5	28	5400	0.135	700	9.70	59	9.92	61
SCS0603-10N□-S	10	250	10 / 5 / 2	31	4800	0.130	700	10.0	66	10.6	83
SCS0603-11N□-S	11	250	10 / 5 / 2	33	4000	0.086	700	11.0	53	11.5	56
SCS0603-12N□-S	12	250	10 / 5 / 2	35	4000	0.130	700	12.3	72	13.5	83
SCS0603-15N□-S	15	250	10 / 5 / 2	35	4000	0.170	700	15.4	64	16.8	89
SCS0603-16N□-S	16	250	10 / 5 / 2	34	3300	0.104	700	16.2	55	17.3	52
SCS0603-18N□-S	18	250	10 / 5 / 2	35	3100	0.170	700	18.7	70	21.4	69
SCS0603-22N□-S	22	250	10 / 5 / 2	38	3000	0.190	700	22.8	73	26.1	71
SCS0603-24N□-S	24	250	10 / 5 / 2	37	2650	0.135	700	24.5	45	28.7	39
SCS0603-27N□-S	27	250	10 / 5 / 2	40	2800	0.220	600	29.2	74	34.6	65
SCS0603-30N□-S	30	250	10 / 5 / 2	37	2250	0.144	600	31.4	47	39.9	28
SCS0603-33N□-S	33	250	10 / 5 / 2	40	2300	0.220	600	36	67	49.5	42
SCS0603-36N□-S	36	250	10 / 5 / 2	38	2080	0.250	600	39.4	47	52.7	24
SCS0603-39N□-S	39	250	10 / 5 / 2	40	2200	0.250	600	42.7	60	60.2	40
SCS0603-43N□-S	43	250	10 / 5 / 2	39	2000	0.280	600	47	44	64.9	21
SCS0603-47N□-S	47	200	10 / 5 / 2	38	2000	0.280	600	52.2	62	77.2	35
SCS0603-56N□-S	56	200	10 / 5 / 2	38	1900	0.310	600	62.5	56	97	26
SCS0603-68N□-S	68	200	10 / 5 / 2	37	1700	0.340	600	80.5	54	168	21
SCS0603-72N□-S	72	150	10 / 5 / 2	34	1700	0.490	400	82	53	135	20
SCS0603-82N□-S	82	150	10 / 5 / 2	34	1700	0.540	400	96.2	54	177	21
SCS0603-R10□-S	100	150	10 / 5 / 2	34	1400	0.580	400	124	49	-	-
SCS0603-R11□-S	110	150	10 / 5 / 2	32	1350	0.610	300	138	43	-	-
SCS0603-R12□-S	120	150	10 / 5 / 2	32	1300	0.750	300	166	39	-	-
SCS0603-R15□-S	150	150	10 / 5 / 2	28	990	0.920	280	250	25	-	-
SCS0603-R18□-S	180	100	10 / 5 / 2	25	990	1.250	240	305	22	-	-
SCS0603-R22□-S	220	100	10 / 5 / 2	25	900	2.100	200	-	-	-	-
SCS0603-R27□-S	270	100	10 / 5 / 2	24	900	2.800	170	-	-	-	-
SCS0603-R33□-S	330	100	10 / 5 / 2	25	900	3.890	100	-	-	-	-
SCS0603-R39□-S	390	100	10 / 5 / 2	25	900	4.350	100	-	-	-	-
SCS0603-R47□-S	470	100	10 / 5 / 2	25	700	7.000	75	-	-	-	-

- When ordering, please specify tolerance and packaging codes.
- Tolerance : G = ±2% , J = ±5% , K = ±10%
- Packaging: Clear tape and reel {standard}.
- L /Q: Agilent/HP4291A+ Agilent/HP16197A
- SRF: HP8753D/ HP4291A
- RDC: CH502BC/HP4338B
- Irms for a 15℃ rise above 25℃ ambient.
- Operating temperature range from -40℃ to 125℃. (Including self - temperature rise)

SMD Wire Wound Ceramic Chip Inductors – SCS Series

Electrical Characteristics

Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Freque ncy (MHz)	SRF (MHz) Min	Rdc (Ω) Max	Irms (mA) Max
SCS0805-2N8□-S	2.8	250	10 / 5	80	1500	7900	0.06	800
SCS0805-3N0□-S	3.0	250	10 / 5	65	1500	7900	0.06	800
SCS0805-3N3□-S	3.3	250	10 / 5	50	1500	7900	0.08	600
SCS0805-5N6□-S	5.6	250	10 / 5	65	1000	5500	0.08	600
SCS0805-6N8□-S	6.8	250	10 / 5	50	1000	5500	0.11	600
SCS0805-7N5□-S	7.5	250	10 / 5	50	1000	4500	0.14	600
SCS0805-8N2□-S	8.2	250	10 / 5	50	1000	4700	0.12	600
SCS0805-10N□-S	10	250	10 / 5 / 2	60	500	4200	0.10	600
SCS0805-12N□-S	12	250	10 / 5 / 2	50	500	4000	0.15	600
SCS0805-15N□-S	15	250	10 / 5 / 2	50	500	3400	0.17	600
SCS0805-18N□-S	18	250	10 / 5 / 2	50	500	3300	0.20	600
SCS0805-22N□-S	22	250	10 / 5 / 2	55	500	2600	0.22	500
SCS0805-24N□-S	24	250	10 / 5 / 2	50	500	2000	0.22	500
SCS0805-27N□-S	27	250	10 / 5 / 2	55	500	2500	0.25	500
SCS0805-33N□-S	33	250	10 / 5 / 2	60	500	2050	0.27	500
SCS0805-36N□-S	36	250	10 / 5 / 2	55	500	1700	0.27	500
SCS0805-39N□-S	39	250	10 / 5 / 2	60	500	2000	0.29	500
SCS0805-43N□-S	43	200	10 / 5 / 2	60	500	1650	0.34	500
SCS0805-47N□-S	47	200	10 / 5 / 2	60	500	1650	0.31	500
SCS0805-56N□-S	56	200	10 / 5 / 2	60	500	1550	0.34	500
SCS0805-68N□-S	68	200	10 / 5 / 2	60	500	1350	0.38	500
SCS0805-82N□-S	82	150	10 / 5 / 2	65	500	1300	0.42	400
SCS0805-91N□-S	91	150	10 / 5 / 2	65	500	1200	0.48	400
SCS0805-R10□-S	100	150	10 / 5 / 2	65	500	1200	0.46	400
SCS0805-R11□-S	110	150	10 / 5 / 2	50	250	1000	0.48	400
SCS0805-R12□-S	120	150	10 / 5 / 2	50	250	1100	0.51	400
SCS0805-R15□-S	150	100	10 / 5 / 2	50	250	920	0.56	400
SCS0805-R18□-S	180	100	10 / 5 / 2	50	250	870	0.64	400
SCS0805-R20□-S	200	100	10 / 5 / 2	50	250	860	0.68	400
SCS0805-R22□-S	220	100	10 / 5 / 2	50	250	850	0.70	400
SCS0805-R24□-S	240	100	10 / 5 / 2	44	250	690	1.00	350
SCS0805-R25□-S	250	100	10 / 5 / 2	45	250	660	1.20	350
SCS0805-R27□-S	270	100	10 / 5 / 2	48	250	650	1.00	350
SCS0805-R33□-S	330	100	10 / 5 / 2	48	250	600	1.40	310
SCS0805-R39□-S	390	100	10 / 5 / 2	48	250	560	1.50	290
SCS0805-R47□-S	470	50	10 / 5 / 2	33	100	375	1.76	250
SCS0805-R56□-S	560	25	10 / 5 / 2	23	50	340	1.90	230
SCS0805-R62□-S	620	25	10 / 5 / 2	23	50	220	2.20	210
SCS0805-R68□-S	680	25	10 / 5 / 2	23	50	188	2.20	190
SCS0805-R82□-S	820	25	10 / 5 / 2	23	50	215	2.35	180
SCS0805-1R0□-S	1000	25	10 / 5 / 2	20	50	100	2.50	170
SCS0805-1R2□-S	1200	7.9	10 / 5 / 2	18	25	100	2.50	170

- When ordering, please specify tolerance and packaging codes.
- Tolerance : G = ±2% , J = ±5% , K = ±10%
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- SRF: Agilent/HP8753D / Agilent/HP4291A
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- Irms for a 15℃ rise above 25℃ ambient.
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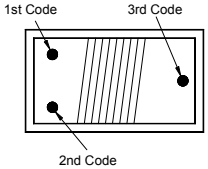
SMD Wire Wound Ceramic Chip Inductors – SCS Series

Electrical Characteristics

Part Number	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF (MHz) Min	Rdc (Ω) Max	Irms (mA) Max	Color Coding 1ST	2ND	3RD
SCS1008-10N□-S	10	50	10 / 5 / 2	50	500	4100	0.08	1000	Brown	Black	Black
SCS1008-12N□-S	12	50	10 / 5 / 2	50	500	3300	0.09	1000	Brown	Red	Black
SCS1008-15N□-S	15	50	10 / 5 / 2	50	500	2500	0.10	1000	Brown	Green	Black
SCS1008-18N□-S	18	50	10 / 5 / 2	50	350	2500	0.11	1000	Brown	Gray	Black
SCS1008-22N□-S	22	50	10 / 5 / 2	55	350	2400	0.12	1000	Red	Red	Black
SCS1008-27N□-S	27	50	10 / 5 / 2	55	350	1600	0.13	1000	Red	Violet	Black
SCS1008-33N□-S	33	50	10 / 5 / 2	60	350	1600	0.14	1000	Orange	Orange	Black
SCS1008-39N□-S	39	50	10 / 5 / 2	60	350	1500	0.15	1000	Orange	White	Black
SCS1008-47N□-S	47	50	10 / 5 / 2	65	350	1500	0.16	1000	Yellow	Violet	Black
SCS1008-56N□-S	56	50	10 / 5 / 2	65	350	1300	0.18	1000	Green	Blue	Black
SCS1008-68N□-S	68	50	10 / 5 / 2	65	350	1300	0.20	1000	Blue	Gray	Black
SCS1008-82N□-S	82	50	10 / 5 / 2	60	350	1000	0.22	1000	Gray	Red	Black
SCS1008-R10□-S	100	25	10 / 5 / 2	60	350	1000	0.56	650	Brown	Black	Brown
SCS1008-R12□-S	120	25	10 / 5 / 2	60	350	950	0.63	650	Brown	Red	Brown
SCS1008-R15□-S	150	25	10 / 5 / 2	45	100	850	0.70	580	Brown	Green	Brown
SCS1008-R18□-S	180	25	10 / 5 / 2	45	100	750	0.77	620	Brown	Gray	Brown
SCS1008-R22□-S	220	25	10 / 5 / 2	45	100	700	0.84	500	Red	Red	Brown
SCS1008-R27□-S	270	25	10 / 5 / 2	45	100	600	0.91	500	Red	Violet	Brown
SCS1008-R33□-S	330	25	10 / 5 / 2	45	100	570	1.05	450	Orange	Orange	Brown
SCS1008-R39□-S	390	25	10 / 5 / 2	45	100	500	1.12	470	Orange	White	Brown
SCS1008-R47□-S	470	25	10 / 5 / 2	45	100	450	1.19	470	Yellow	Violet	Brown
SCS1008-R56□-S	560	25	10 / 5 / 2	45	100	415	1.33	400	Green	Blue	Brown
SCS1008-R62□-S	620	25	10 / 5 / 2	45	100	375	1.40	300	Blue	Red	Brown
SCS1008-R68□-S	680	25	10 / 5 / 2	45	100	375	1.47	400	Blue	Gray	Brown
SCS1008-R75□-S	750	25	10 / 5 / 2	45	100	360	1.54	360	Violet	Green	Brown
SCS1008-R82□-S	820	25	10 / 5 / 2	45	100	350	1.61	400	Gray	Red	Brown
SCS1008-R91□-S	910	25	10 / 5 / 2	35	50	320	1.68	380	White	Brown	Brown
SCS1008-1R0□-S	1000	25	10 / 5 / 2	35	50	290	1.75	370	Brown	Black	Red
SCS1008-1R2□-S	1200	7.9	10 / 5 / 2	35	50	250	2.0	310	Brown	Red	Red
SCS1008-1R5□-S	1500	7.9	10 / 5 / 2	28	50	200	2.3	330	Brown	Green	Red
SCS1008-1R8□-S	1800	7.9	10 / 5 / 2	28	50	160	2.6	300	Brown	Gray	Red
SCS1008-2R2□-S	2200	7.9	10 / 5 / 2	28	50	160	2.8	280	Red	Red	Red
SCS1008-2R7□-S	2700	7.9	10 / 5 / 2	22	25	140	3.2	290	Red	Violet	Red
SCS1008-3R3□-S	3300	7.9	10 / 5 / 2	22	25	110	3.4	290	Orange	Orange	Red
SCS1008-3R9□-S	3900	7.9	10 / 5 / 2	20	25	100	3.6	260	Orange	White	Red
SCS1008-4R7□-S	4700	7.9	10 / 5 / 2	20	25	90	4.0	260	Yellow	Violet	Red
SCS1008-5R6□-S	5600	7.9	10 / 5 / 2	18	7.9	45	4.0	240	Green	Blue	Red
SCS1008-6R8□-S	6800	7.9	10 / 5 / 2	18	7.9	40	4.9	200	Blue	Gray	Red
SCS1008-8R2□-S	8200	7.9	10 / 5 / 2	18	7.9	25	6.0	170	Gray	Red	Red
SCS1008-100□-S	10000	2.52	10 / 5 / 2	18	7.9	25	8.0	150	Brown	Black	Orange

- When ordering, please specify tolerance and packaging codes.
- Tolerance : G = ±2% , J = ±5% , K = ±10%
- Packaging: Clear tape and reel {standard}
- L/Q: Agilent/HP4291A+ Agilent/HP16197A
- SRF: Agilent/HP8753D / Agilent/HP4291A
- RDC: CH502BC/HP4338B
- Irms for a 15℃ rise above 25℃ ambient.
- Operating temperature range from -40℃ to 125℃. (Including self - temperature rise)
- Inductance would be correct Chilisin standard piece.



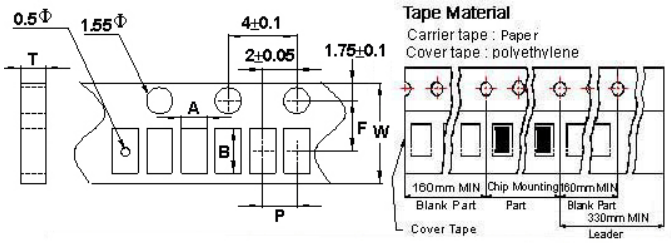
COLOR CODING

SMD Wire Wound Ceramic Chip Inductors - SCS Series

Packaging Specifications

Tape Dimensions

Figure 1



Tape Dimensions

Figure 2

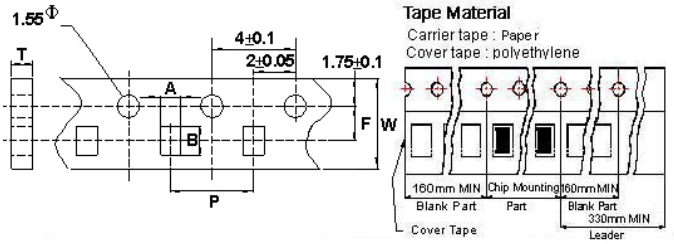
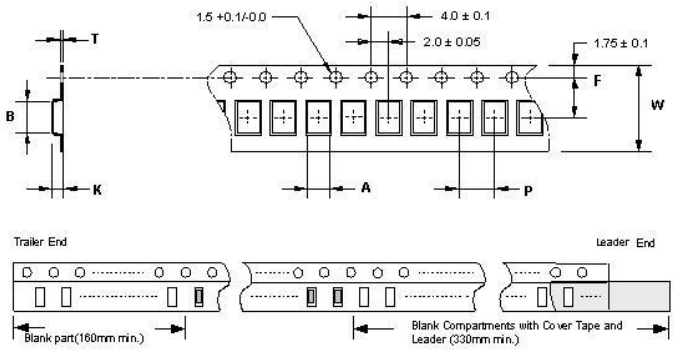
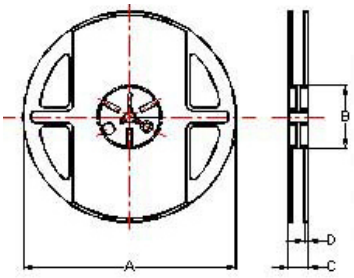


Figure 3



Reel Dimensions



Dimensions in mm

TYPE	Fig.	Tape Dimensions							Reel Dimensions				Quantity
		A	B	T	W	P	F	K	A	B	C	D	PCS / Reel
SCS0402	1	0.74	1.23	0.68	8	2	3.5	-	178	60	12	1.5	10000
SCS0603	2	1.16	1.85	0.95	8	4	3.5	-	178	60	12	1.5	4000
SCS0805	3	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2000
SCS1008	3	2.80	2.95	0.23	8	4	3.5	2.20	178	60	12	1.5	2000