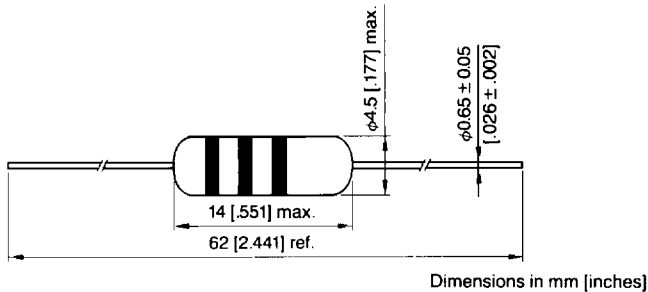


Inductors

AXIAL LEAD TYPE FOR LARGE CURRENT, SP SERIES SP0508 TYPE



CHARACTERISTICS

Operating temperature range	- 20 to +85°C [- 4 to +185°F] (including self-temperature rise, 20°C [36°F] max.)
Storage temperature range	- 30 to +60°C [- 22 to +140°F]
Terminal tensile strength	2.5kg min.

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μ H)	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) ref.	DC resistance (Ω) max.	Rated current (mA) max.	
						Based on inductance change	Based on temperature rise
SP0508-1R0K3R8	1 \pm 10%	10	7.96	300	0.022	5600	3800
SP0508-1R2K3R7	1.2 \pm 10%	10	7.96	260	0.024	5500	3700
SP0508-1R5K3R6	1.5 \pm 10%	10	7.96	250	0.026	5000	3600
SP0508-1R8K3R1	1.8 \pm 10%	10	7.96	240	0.029	4700	3100
SP0508-2R2K2R9	2.2 \pm 10%	10	7.96	220	0.031	4500	2900
SP0508-2R7K2R7	2.7 \pm 10%	10	7.96	195	0.034	4000	2700
SP0508-3R3K2R6	3.3 \pm 10%	10	7.96	155	0.038	3400	2600
SP0508-3R9K2R5	3.9 \pm 10%	10	7.96	115	0.04	3100	2500
SP0508-4R7K2R4	4.7 \pm 10%	10	7.96	85	0.044	2800	2400
SP0508-5R6K2R1	5.6 \pm 10%	10	7.96	55	0.048	2600	2100
SP0508-6R8K2R0	6.8 \pm 10%	10	7.96	50	0.051	2400	2000
SP0508-8R2K2R0	8.2 \pm 10%	10	7.96	38	0.056	2200	1950
SP0508-100K1R9	10 \pm 10%	10	7.96	24	0.062	2100	1900
SP0508-120K1R8	12 \pm 10%	10	2.52	18	0.076	1800	1800
SP0508-150K1R7	15 \pm 10%	10	2.52	16	0.088	1700	1700
SP0508-180K1R6	18 \pm 10%	10	2.52	15	0.11	1600	1600
SP0508-220K1R4	22 \pm 10%	10	2.52	14	0.13	1400	1550
SP0508-270K1R3	27 \pm 10%	10	2.52	13	0.14	1300	1300
SP0508-330K1R2	33 \pm 10%	10	2.52	11	0.2	1200	1200
SP0508-390K1R0	39 \pm 10%	10	2.52	10	0.22	1100	1000
SP0508-470K1R0	47 \pm 10%	10	2.52	9.5	0.28	1000	950
SP0508-560KR90	56 \pm 10%	10	2.52	8	0.3	900	900
SP0508-680KR80	68 \pm 10%	10	2.52	7.5	0.34	800	800
SP0508-820KR70	82 \pm 10%	10	2.52	7	0.385	700	750
SP0508-101KR70	100 \pm 10%	10	2.52	6.5	0.48	700	700
SP0508-121KR60	120 \pm 10%	15	0.796	5	0.595	600	600
SP0508-151KR50	150 \pm 10%	15	0.796	4.5	0.9	550	500
SP0508-181KR40	180 \pm 10%	15	0.796	4	1.1	500	400
SP0508-221KR39	220 \pm 10%	15	0.796	3.8	1.25	440	390
SP0508-271KR33	270 \pm 10%	15	0.796	3.5	1.85	420	330

* L, Q: HP 4194A Impedance/gain-phase analyzer, HP 16047D Test fixture
 SRF: HP 8753C Network analyzer
 Rdc: Digital milliohm meter, VP 2941A MATSUSHITA

Inductors

SP0508 TYPE

ELECTRICAL CHARACTERISTICS

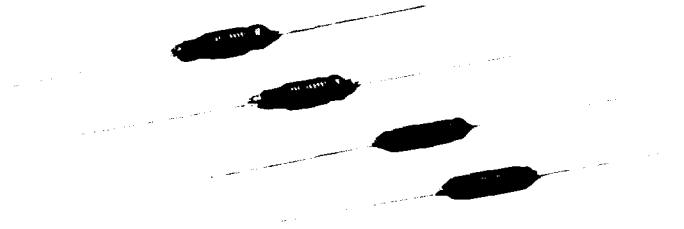
Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) ref.	DC resistance (Ω) max.	Rated current (mA) max.	
						Based on inductance change	Based on temperature rise
SP0508-331KR30	330 \pm 10%	15	0.796	3	2.1	380	310
SP0508-391KR30	390 \pm 10%	15	0.796	2.8	2.28	340	300
SP0508-471KR28	470 \pm 10%	15	0.796	2.5	3.22	320	280
SP0508-561KR27	560 \pm 10%	15	0.796	2.2	3.85	290	270
SP0508-681KR24	680 \pm 10%	15	0.796	2.1	4	260	240
SP0508-821KR23	820 \pm 10%	15	0.796	2	5	250	230
SP0508-102KR19	1000 \pm 10%	15	0.796	1.8	5.8	240	190
SP0508-122KR18	1200 \pm 10%	15	0.252	1.6	7.1	200	180
SP0508-152KR17	1500 \pm 10%	15	0.252	1.5	7.8	190	170

*L, Q: HP 4194A Impedance/gain-phase analyzer, HP 16047D Test fixture
 SRF: HP 8753C Network analyzer
 Rdc: Digital milliohm meter, VP 2941A MATSUSHITA

SP0412, SP0615, SP0720, SP0830 TYPES

CHARACTERISTICS

Operating temperature range	- 20 to +100°C [- 4 to +212°F] (including self-temperature rise, 20°C [36°F] max.)
Storage temperature range	- 40 to +100°C [- 40 to +212°F]
Dielectric withstanding voltage	500 Vdc
Rated current	Current when initial value of inductance falls by 10% due to DC superposition characteristics.
Terminal tensile strength	2.5 kg min. [not applicable to those marked with asterisks (*)]
Moisture resistance characteristics	$\Delta L/L \leq \pm 5\%$ $\Delta Q/Q \leq \pm 20\%$



SP0412 TYPE

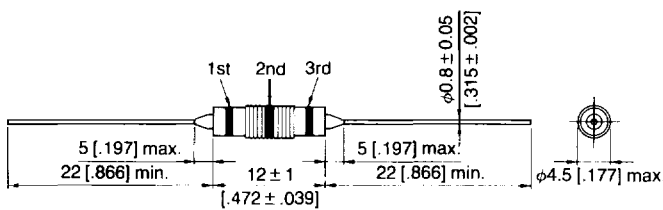


Fig. 1

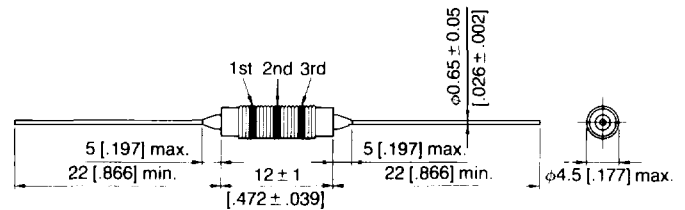


Fig. 2

Dimensions in mm [inches]

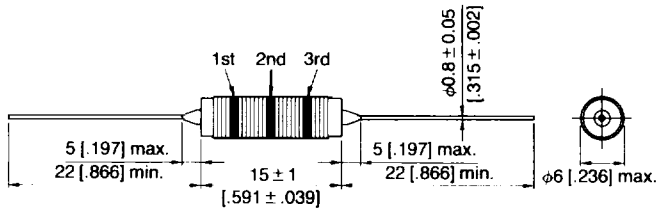
ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	DC resistance (Ω) max.	Rated current (A) max.	Fig.
SP0412-1R0M4R5-7	1 \pm 20%	20	7.96	0.022	4.5	1
SP0412-1R5M4R5-7	1.5 \pm 20%	20	7.96	0.026	4.5	1
SP0412-2R2M4R5-7	2.2 \pm 20%	20	7.96	0.03	4.5	1
SP0412-3R3M4R0-7	3.3 \pm 20%	20	7.96	0.035	4	1
SP0412-4R7M2R5-7	4.7 \pm 20%	20	7.96	0.07	2.5	2
SP0412-6R8M1R5-7	6.8 \pm 20%	20	7.96	0.12	1.5	2
SP0412-100M1R5-7	10 \pm 20%	20	7.96	0.14	1.5	2
SP0412-150M1R0-7	15 \pm 20%	20	2.52	0.26	1	2

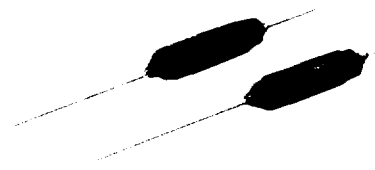
*L, Q: Q meter, MODEL 4340A YHP Rdc: Milliohm meter, MODEL VP-2941A MATSUSHITA

Inductors

SP0615 TYPE



Dimensions in mm [inches]

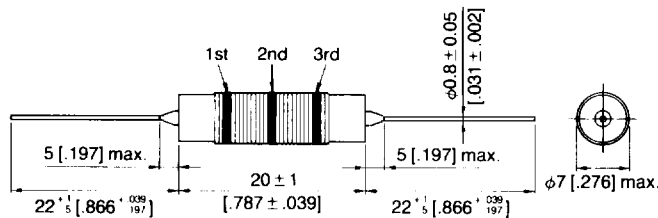


ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	DC resistance (Ω) max.	Rated current (A) max.
SP0615-1R0M6R0-7	1 ± 20%	20	7.96	0.013	6
SP0615-1R5M6R0-7	1.5 ± 20%	20	7.96	0.016	6
SP0615-2R2M6R0-7	2.2 ± 20%	20	7.96	0.019	6
SP0615-3R3M6R0-7	3.3 ± 20%	20	7.96	0.023	6
SP0615-4R7M5R0-7	4.7 ± 20%	20	7.96	0.034	5
SP0615-6R8M4R5-7	6.8 ± 20%	20	7.96	0.055	4.5
SP0615-100M3R5-7	10 ± 20%	20	7.96	0.078	3.5
SP0615-150M2R5-7	15 ± 20%	20	2.52	0.15	2.5
SP0615-220M2R0-7	22 ± 20%	20	2.52	0.25	2
SP0615-330M1R0-7	33 ± 20%	20	2.52	0.46	1

* L, Q: Q meter, MODEL 4340A YHP Rdc: Milliohm meter, MODEL VP-2941A MATSUSHITA

SP0720 TYPE



Dimensions in mm [inches]



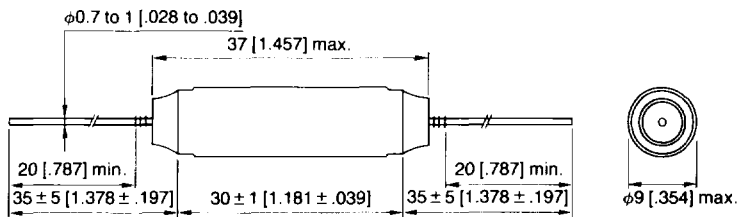
ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	DC resistance (Ω) max.	Rated current (A) max.
SP0720-1R0M6R0-7	1 ± 20%	20	7.96	0.013	6
SP0720-1R5M6R0-7	1.5 ± 20%	20	7.96	0.015	6
SP0720-2R2M6R0-7	2.2 ± 20%	20	7.96	0.018	6
SP0720-3R3M6R0-7	3.3 ± 20%	20	7.96	0.02	6
SP0720-4R7M6R0-7	4.7 ± 20%	20	7.96	0.025	6
SP0720-6R8M6R0-7	6.8 ± 20%	20	7.96	0.031	6
SP0720-100M5R0-7	10 ± 20%	20	7.96	0.055	5
SP0720-150M4R0-7	15 ± 20%	20	2.52	0.074	4
SP0720-220M3R5-7	22 ± 20%	20	2.52	0.11	3.5
SP0720-330M2R0-7	33 ± 20%	20	2.52	0.23	2
SP0720-470M1R5-7	47 ± 20%	20	2.52	0.39	1.5
SP0720-680M1R0-7	68 ± 20%	20	2.52	0.72	1

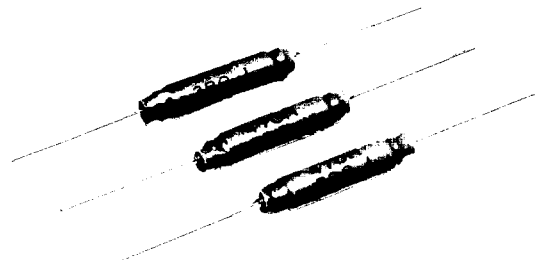
* L, Q: Q meter, MODEL 4340A YHP Rdc: Milliohm meter, MODEL VP-2941A MATSUSHITA

Inductors

SP0830 TYPE



Dimensions in mm [inches]



ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μ H)	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) ref.	DC resistance (Ω) max.	Rated current (A) max.
SP0830-1R0M100*	1 \pm 20%	20	7.96	160	0.006	10
SP0830-1R5M100*	1.5 \pm 20%	20	7.96	135	0.008	10
SP0830-2R2M100*	2.2 \pm 20%	20	7.96	110	0.009	10
SP0830-3R3M100*	3.3 \pm 20%	20	7.96	95	0.011	10
SP0830-4R7M100*	4.7 \pm 20%	20	7.96	82	0.013	10
SP0830-6R8M100*	6.8 \pm 20%	20	7.96	73	0.015	10
SP0830-100M9R0*	10 \pm 20%	20	7.96	62	0.022	9
SP0830-150M6R0*	15 \pm 20%	20	2.52	45	0.038	6
SP0830-220M5R0*	22 \pm 20%	20	2.52	39	0.057	5
SP0830-330M3R5	33 \pm 20%	20	2.52	32	0.11	3.5
SP0830-470M3R0	47 \pm 20%	20	2.52	27	0.17	3
SP0830-680M2R5	68 \pm 20%	20	2.52	23	0.21	2.5
SP0830-101M2R0	100 \pm 20%	20	2.52	19	0.42	2
SP0830-151M1R5	150 \pm 20%	20	0.796	16	0.78	1.5
SP0830-221M1R0	220 \pm 20%	20	0.796	14	1.27	1

* See the CHARACTERISTICS table, item "Terminal tensile strength." (P. 9-29)

• L, Q: Q meter, MODEL 4340A YHP Rdc: Milliohm meter, MODEL VP-2941A MATSUSHITA SRF: Grid dip meter, MODEL 159 MEASUREMENTS