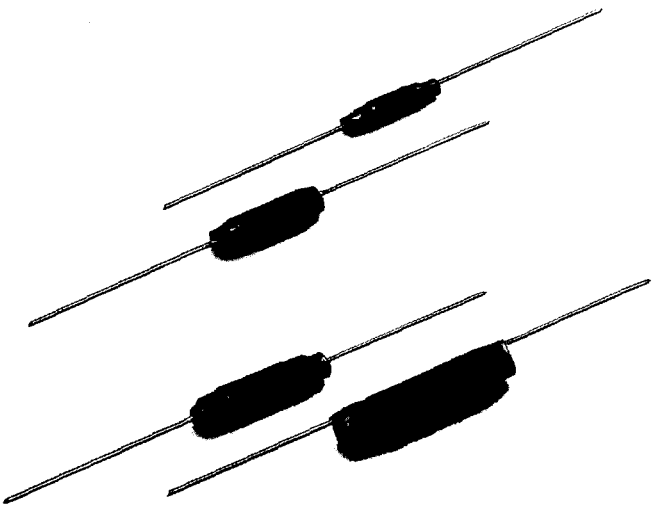
TDK Fixed Inductors

Axial lead inductors, 1A to 10A

SP0412, SP0615, SP0720, SP0830 TYPE

These products have been developed as measures against the EMI from motor of automobile and electric tools, etc. Recently, however, they are being used for switching power supplies and against FTZ noise (EMI).



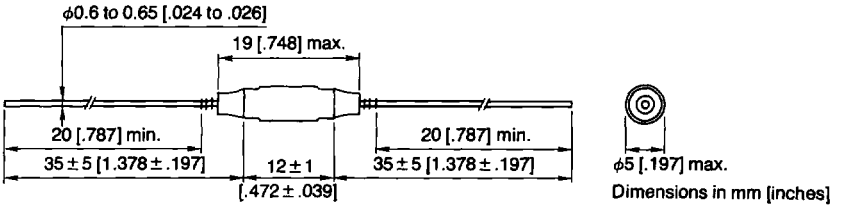
FEATURES

- Since they are coaxial leaded types with one-layer windings, they can achieve high withstanding voltage between wires and high self-resonant frequency.
- By incorporating TDK's ferrite core, they have excellent suppression and preventing effects against high frequency EMI and spike noise.
- By employing a shrinkable tube, they realize high withstanding voltage and high insulation resistance.

CHARACTERISTICS

Temperature rise	40°C [72°F] max.
Ambient temperature	60°C [140°F] max.
Operating temperature range	−20 to +100°C [−4 to +212°F] including self-temperature rise
Storage temperature range	−40 to +100°C [−40 to +212°F]
Dielectric withstanding voltage	500Vdc
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 (*) of page 123 to 125]
Moisture resistance characteristics	$\Delta L/L \leqq \pm 5\%$ $\Delta Q/Q \leqq \pm 20\%$

SP0412 TYPE (1 to 4.5A)



Dimensions in mm [inches]

ELECTRICAL CHARACTERISTICS

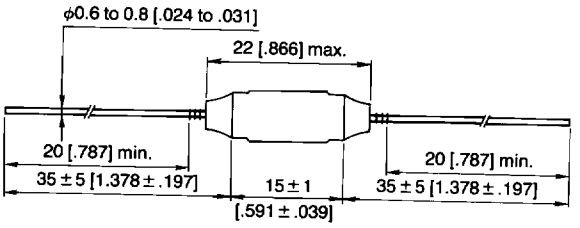
Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) typ.	DC resistance (Ω) max.	Rated current (A) max.
SP0412-1R0M4R5*	1±20%	20	7.96	220	0.022	4.5
SP0412-1R5M4R5	1.5±20%	20	7.96	175	0.026	4.5
SP0412-2R2M4R5	2.2±20%	20	7.96	145	0.03	4.5
SP0412-3R3M4R0	3.3±20%	20	7.96	120	0.035	4
SP0412-4R7M2R5	4.7±20%	20	7.96	105	0.07	2.5
SP0412-6R8M1R5	6.8±20%	20	7.96	90	0.12	1.5
SP0412-100M1R5	10±20%	20	7.96	75	0.14	1.5
SP0412-150M1R0	15±20%	20	2.52	65	0.26	1

** See the above, "Terminal tensile strength."*
• L, Q: Q meter, MODEL 4340A YHP Rdc: Milliohm meter, MODEL VP-2941A MATSUSHITA SRF: Grid dip meter, MODEL 159 MEASUREMENTS

TDK Fixed Inductors

Axial lead inductors, 1A to 10A

SP0615 TYPE (1 to 6A)



Dimensions in mm [inches]

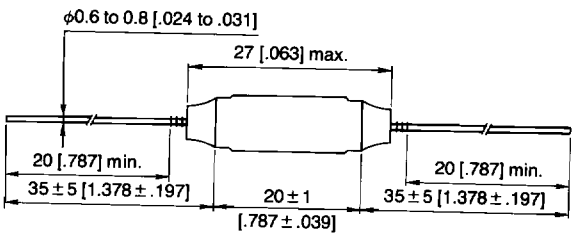
ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) typ.	DC resistance (Ω) max.	Rated current (A) max.
SP0615-1R0M6R0*	1 ± 20%	20	7.96	200	0.013	6
SP0615-1R5M6R0*	1.5 ± 20%	20	7.96	155	0.016	6
SP0615-2R2M6R0*	2.2 ± 20%	20	7.96	140	0.019	6
SP0615-3R3M6R0*	3.3 ± 20%	20	7.96	110	0.023	6
SP0615-4R7M5R0	4.7 ± 20%	20	7.96	95	0.034	5
SP0615-6R8M4R5	6.8 ± 20%	20	7.96	80	0.055	4.5
SP0615-100M3R5	10 ± 20%	20	7.96	70	0.078	3.5
SP0615-150M2R5	15 ± 20%	20	2.52	55	0.15	2.5
SP0615-220M2R0	22 ± 20%	20	2.52	45	0.25	2
SP0615-330M1R0	33 ± 20%	20	2.52	40	0.46	1

** See page 123, Terminal tensile strength.*

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

SP0720 TYPE (1 to 7A)



Dimensions in mm [inches]

ELECTRICAL CHARACTERISTICS

Part No.	Inductance (μH)	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz) typ.	DC resistance (Ω) max.	Rated current (A) max.
SP0720-1R0M7R0*	1 ± 20%	20	7.96	190	0.007	7
SP0720-1R5M7R0*	1.5 ± 20%	20	7.96	145	0.01	7
SP0720-2R2M7R0*	2.2 ± 20%	20	7.96	115	0.013	7
SP0720-3R3M7R0*	3.3 ± 20%	20	7.96	102	0.016	7
SP0720-4R7M7R0*	4.7 ± 20%	20	7.96	90	0.025	7
SP0720-6R8M6R0*	6.8 ± 20%	20	7.96	80	0.031	6
SP0720-100M5R0	10 ± 20%	20	7.96	66	0.055	5
SP0720-150M4R0	15 ± 20%	20	2.52	52	0.074	4
SP0720-220M3R5	22 ± 20%	20	2.52	43	0.11	3.5
SP0720-330M2R0	33 ± 20%	20	2.52	37	0.23	2
SP0720-470M1R5	47 ± 20%	20	2.52	30	0.39	1.5
SP0720-680M1R0	68 ± 20%	20	2.52	25	0.72	1

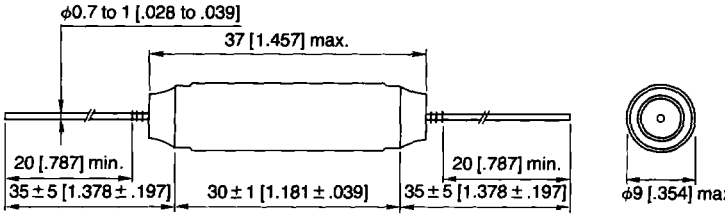
** See page 123, Terminal tensile strength.*

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

TDK Fixed Inductors

Axial lead inductors, 1A to 10A

SP0830 TYPE (1 to 10A)



Dimensions in mm [inches]

ELECTRICAL CHARACTERISTICS

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

*See page 123, Terminal tensile strength.

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