

Leaded Inductors (Fixed Choke Coils)

FASTRON leaded inductors come with a very wide inductance range from 0.1µH to 100000µH and with high Q values. They are available in tape and ammpack packing.

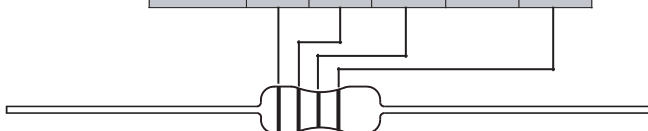
Applications These components are suitable for decoupling and interference suppression.
Communication: RF blocking and filtering, e.g. 12 ~ 16 kHz blocking filter.
Others: Automotive electronics, electronic household appliances, entertainment electronics, lighting devices, medical applications.

Technical Data

L – Value (rated inductance)	Measured with Bode 100 Vector Network Analyzer or equivalent at frequency f_L
Q – Factor (min)	Measured with Bode 100 Vector Network Analyzer or equivalent at frequency f_Q
SRF (min)	Measured with HP 8753ES Network Analyzer or equivalent
DCR (max)	Measured at 25°C
Rated DC Current	I based on temperature rise, determined at the point where the temperature rise does not exceed 40°C above the ambient temperature of 25°C I1 Current based on ambient temperature of 40°C and component temperature of max. 125°C Isat Current based on inductivity drop of 10% related to the unloaded inductivity
Operating Temperature	-55°C to +125°C (including component self-heating)
Recommended soldering method	Wave
Solderability	Using lead free solder (Sn 99.9) at 260°C ± 5°C for 5 ± 0.5 seconds, min 90% solder coverage of metallization Standard: IEC 68-2-20 (Ta)
Resistance to Soldering Heat	Resistant to 260°C ± 5°C for 10 ± 1 seconds Standard: IEC 68-2-20 (Tb)
Resistance to Solvent	Resistant to Isopropyl alcohol for 5 ± 0.5 minutes at 23°C ± 5°C Standard: IEC 68-2-45
Climatic Test	Defined by the following standards IEC 68-2-1 for Cold test: -55°C for 96 hours IEC 68-2-2 for Dry heat test: +125°C for 96 hours IEC 60068-2-78 for Humidity test: 40°C at RH 95% for 4 days
Tensile Strength of Leads (Pull Test)	Components withstand a pulling force of 10N for 10 ± 1 second For MICC, MICC/N, MICCS, MICCS/N : Components withstand a pulling force of 5N for 10 ± 1 second IEC 60068-2-21 (Ua1)
Mechanical Shock	Mil-Std 202 Method 213 Condition C 3 axis, 6 times, total 18 shocks 100 G, 6 ms, half-sine
Vibration	Mil-Std 202 Method 204 20 mins at 5G 10 Hz to 2000 Hz 12 cycles each of 3 orientations

Colour Coding Reference according to IEC 60062 :

Code	Nominal Inductance (µH)				Tol. **
	Band 1	Band 2	Band 3	Band 4	
Gold	---	---	x 0.1	± 5 %	J
Silver	---	---	x0.01	± 10 %	K
Clear	---	---	---	± 20 %	M
Black	---	0	x1	---	---
Brown	1	1	x10	± 1 %	F
Red	2	2	x100	± 2 %	G
Orange	3	3	x1000	± 3 %	A
Yellow	4	4	x10000	---	---
Green	5	5	---	---	---
Blue	6	6	---	---	---
Violet	7	7	---	---	---
Grey	8	8	---	---	---
White	9	9	---	---	---



Ordering Code

Example: **SMCC-180X-YY**

SMCC - **180** **X** - **YY**
(Model) (Inductance Value) (Tolerance) (Packing Code)



SMCC-180K-01

Core Type - Ferrite, Phenolic
Tolerances - F (1%), G (2%), H (2.5%), A (3%), J (5%), K (10%), M (20%)

Packing Code	Packing Form	Taped / Reel	Taped / Ammo pack
	Axial	01	02
	Radial	31	32

Packing Specification

Fig. 1: On Reel (Plastic)

Packing code : 01, 31

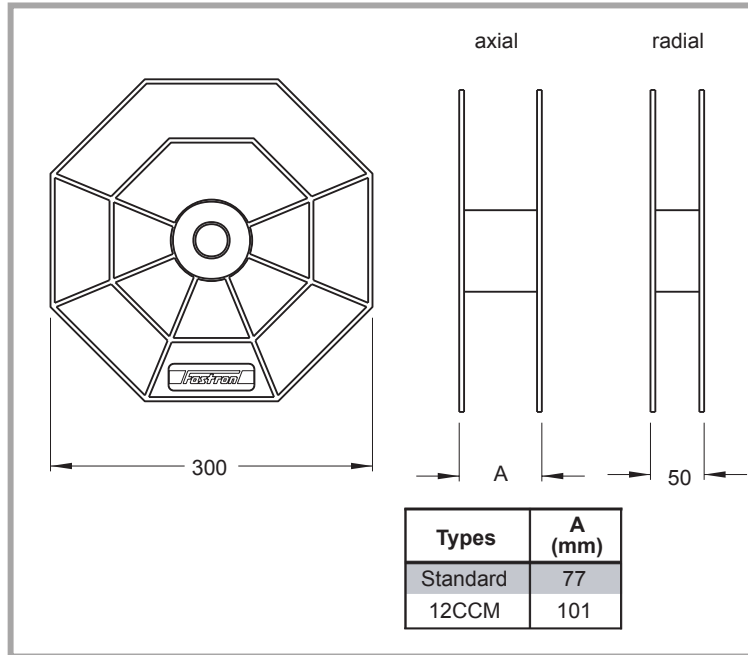


Fig. 2: Ammo pack, axial

Packing code : 02

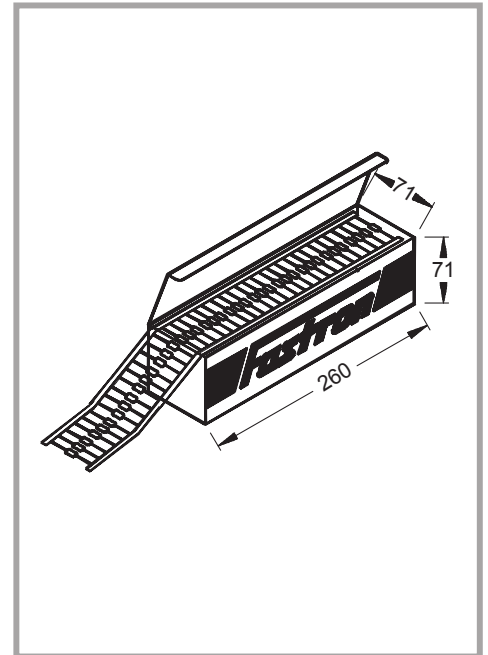


Fig. 3: Axial Standard Taping

Packing code : 01, 02

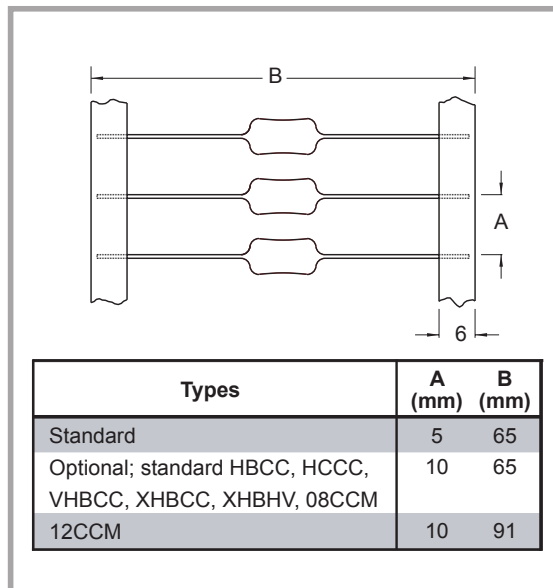
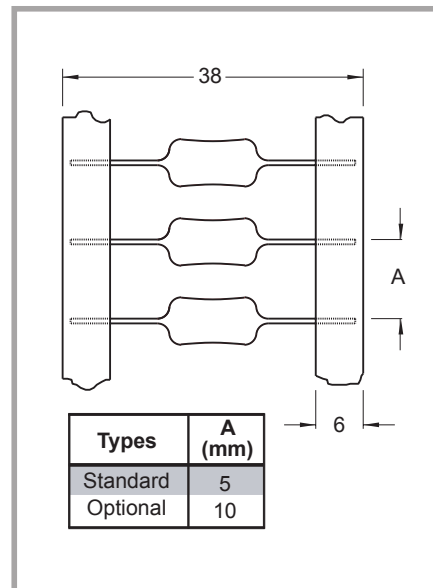


Fig. 4: Axial Narrow Taping (38mm)

Packing code : 11, 12



Packing Specification

Packing Specification

Fig. 5: Radial Taping

Packing code : 31, 32

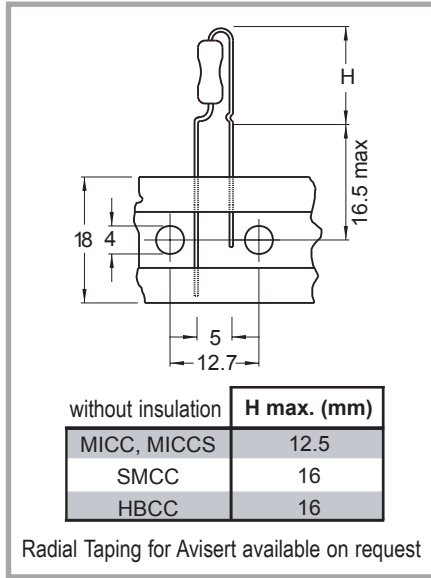


Fig. 6: Ammo pack, radial

Packing code : 32

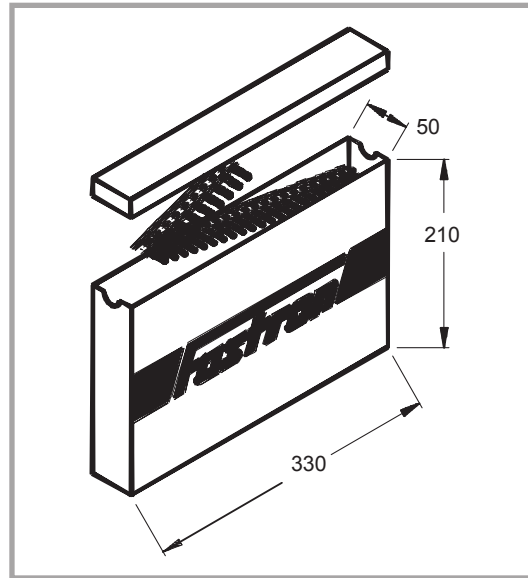
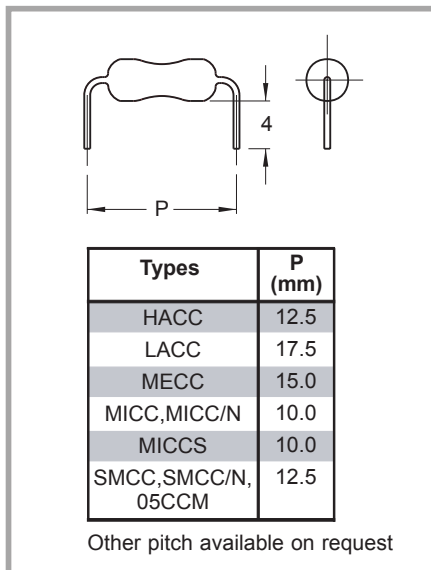


Fig. 7: Axial preformed

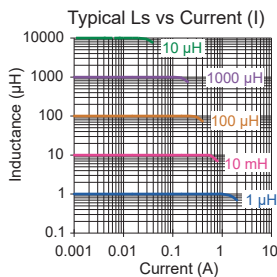
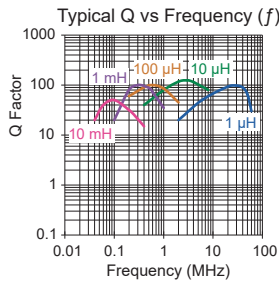
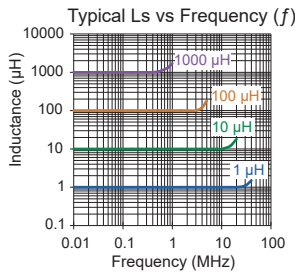
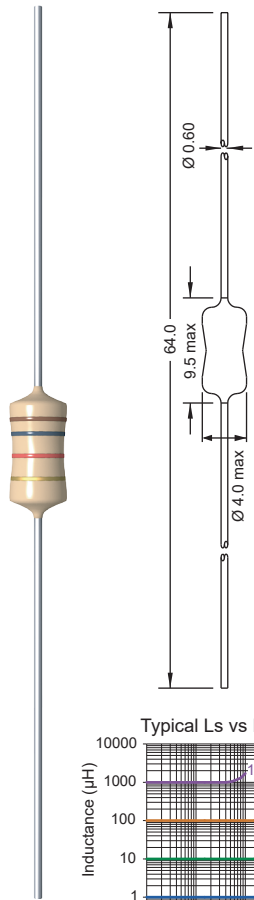
Packing code : 20



Packing Specification



SMCC



SPQ:

Packaging Form	Taped / Reel
Axial	3500 [-01]
Radial	1500 [-31]
	Taped / Ammo pack
Axial	1200 [-02]
Radial	2500 [-32]

Remarks:

SMCC-R10X to SMCC-R82X are suitable for medical applications.

Medical applications (non-magnetic)

Part No	Inductance	f _L	Tol	Q	f _a	SRF	DCR	Rated DC	Core Material
	L (µH)	(MHz)	± (%)	min	(MHz)	min (MHz)	max (Ω)	Current (mA)	
SMCC-R10X-YY	0.10	1	10,20	45	25.2	380	0.08	1600	Phenolic
SMCC-R12X-YY	0.12	1	10,20	45	25.2	360	0.10	1550	Phenolic
SMCC-R15X-YY	0.15	1	10,20	45	25.2	340	0.10	1500	Phenolic
SMCC-R18X-YY	0.18	1	10,20	45	25.2	320	0.10	1480	Phenolic
SMCC-R22X-YY	0.22	1	10,20	45	25.2	300	0.10	1450	Phenolic
SMCC-R27X-YY	0.27	1	10,20	45	25.2	270	0.11	1400	Phenolic
SMCC-R33X-YY	0.33	1	10,20	45	25.2	250	0.12	1350	Phenolic
SMCC-R39X-YY	0.39	1	10,20	45	25.2	230	0.13	1300	Phenolic
SMCC-R47X-YY	0.47	1	10,20	45	25.2	220	0.14	1280	Phenolic
SMCC-R56X-YY	0.56	1	10,20	45	25.2	210	0.15	1240	Phenolic
SMCC-R68X-YY	0.68	1	10,20	45	25.2	200	0.16	1230	Phenolic
SMCC-R82X-YY	0.82	1	10,20	45	25.2	190	0.17	1210	Phenolic
SMCC-1R0X-YY	1.0	1	5,10,20	45	7.96	205	0.16	1200	Ferrite
SMCC-1R2X-YY	1.2	1	5,10,20	50	7.96	185	0.18	1150	Ferrite
SMCC-1R5X-YY	1.5	1	5,10,20	50	7.96	165	0.20	1100	Ferrite
SMCC-1R8X-YY	1.8	1	5,10,20	55	7.96	155	0.22	1030	Ferrite
SMCC-2R2X-YY	2.2	1	5,10,20	55	7.96	140	0.25	1000	Ferrite
SMCC-2R7X-YY	2.7	1	5,10,20	60	7.96	125	0.26	940	Ferrite
SMCC-3R3X-YY	3.3	1	5,10,20	60	7.96	115	0.29	900	Ferrite
SMCC-3R9X-YY	3.9	1	5,10,20	60	7.96	105	0.31	850	Ferrite
SMCC-4R7X-YY	4.7	1	5,10,20	60	7.96	95	0.34	820	Ferrite
SMCC-5R6X-YY	5.6	1	5,10,20	60	7.96	85	0.38	780	Ferrite
SMCC-6R2X-YY	6.2	1	5,10,20	65	7.96	75	0.61	670	Ferrite
SMCC-6R8X-YY	6.8	1	5,10,20	65	7.96	75	0.51	670	Ferrite
SMCC-8R2X-YY	8.2	1	5,10,20	65	7.96	50	0.48	690	Ferrite
SMCC-100X-YY	10	1	5,10,20	65	7.96	35	0.49	680	Ferrite
SMCC-120X-YY	12	0.02	5,10,20	50	2.52	30	0.55	650	Ferrite
SMCC-150X-YY	15	0.02	5,10,20	50	2.52	20	0.6	610	Ferrite
SMCC-180X-YY	18	0.02	5,10,20	50	2.52	17	0.67	580	Ferrite
SMCC-200X-YY	20	0.02	5,10,20	50	2.52	13	0.74	560	Ferrite
SMCC-220X-YY	22	0.02	5,10,20	50	2.52	13	0.74	560	Ferrite
SMCC-270X-YY	27	0.02	5,10,20	55	2.52	10	0.83	530	Ferrite
SMCC-300X-YY	30	0.02	5,10,20	55	2.52	9.00	0.92	500	Ferrite
SMCC-330X-YY	33	0.02	5,10,20	55	2.52	9.00	0.92	500	Ferrite
SMCC-390X-YY	39	0.02	5,10,20	55	2.52	8.00	1.02	470	Ferrite
SMCC-470X-YY	47	0.02	5,10,20	40	2.52	7.50	1.10	450	Ferrite
SMCC-560X-YY	56	0.02	5,10,20	40	2.52	7.00	1.23	430	Ferrite
SMCC-680X-YY	68	0.02	5,10,20	40	2.52	6.50	1.35	410	Ferrite
SMCC-820X-YY	82	0.02	5,10,20	35	2.52	6.00	1.54	390	Ferrite
SMCC-101X-YY	100	0.02	5,10,20	30	2.52	5.00	1.70	370	Ferrite
SMCC-121X-YY	120	0.02	5,10,20	70	0.79	4.50	2.40	300	Ferrite
SMCC-131X-YY	130	0.02	5,10,20	70	0.79	4.20	2.80	280	Ferrite
SMCC-151X-YY	150	0.02	5,10,20	70	0.79	4.20	2.80	280	Ferrite
SMCC-161X-YY	160	0.02	5,10,20	70	0.79	3.90	3.00	270	Ferrite
SMCC-181X-YY	180	0.02	5,10,20	70	0.79	3.90	3.00	270	Ferrite
SMCC-201X-YY	200	0.02	5,10,20	70	0.79	3.70	3.30	250	Ferrite
SMCC-221X-YY	220	0.02	5,10,20	70	0.79	3.70	3.30	250	Ferrite
SMCC-271X-YY	270	0.02	5,10,20	70	0.79	2.80	5.70	200	Ferrite
SMCC-281X-YY	280	0.02	5,10,20	70	0.79	2.80	5.70	190	Ferrite
SMCC-331X-YY	330	0.02	5,10,20	70	0.79	2.70	6.40	190	Ferrite
SMCC-351X-YY	350	0.02	5,10,20	70	0.79	2.40	6.40	180	Ferrite
SMCC-391X-YY	390	0.02	5,10,20	70	0.79	2.40	7.00	180	Ferrite
SMCC-471X-YY	470	0.02	5,10,20	70	0.79	2.20	7.90	170	Ferrite
SMCC-561X-YY	560	0.02	5,10,20	60	0.79	2.00	8.80	160	Ferrite
SMCC-681X-YY	680	0.02	5,10,20	55	0.79	1.90	10.0	150	Ferrite
SMCC-821X-YY	820	0.02	5,10,20	55	0.79	1.60	12.0	140	Ferrite
SMCC-102X-YY	1000	0.02	5,10,20	50	0.79	1.60	14.0	130	Ferrite
SMCC-122X-YY	1200	0.02	5,10,20	50	0.25	1.30	16.9	120	Ferrite
SMCC-152X-YY	1500	0.02	5,10,20	40	0.25	1.25	21.6	100	Ferrite
SMCC-182X-YY	1800	0.02	5,10,20	40	0.25	1.20	24.0	95	Ferrite
SMCC-202X-YY	2000	0.02	5,10,20	40	0.25	1.10	32.1	80	Ferrite
SMCC-222X-YY	2200	0.02	5,10,20	40	0.25	1.10	34.7	80	Ferrite
SMCC-272X-YY	2700	0.02	5,10,20	40	0.25	1.00	40.0	75	Ferrite
SMCC-332X-YY	3300	0.02	5,10,20	40	0.25	0.90	59.5	62	Ferrite
SMCC-352X-YY	3500	0.02	5,10,20	40	0.25	0.70	59.5	59	Ferrite
SMCC-392X-YY	3900	0.02	5,10,20	40	0.25	0.80	66.0	59	Ferrite
SMCC-472X-YY	4700	0.02	5,10,20	40	0.25	0.70	74.0	55	Ferrite
SMCC-502X-YY	5000	0.02	5,10,20	30	0.25	0.55	70.0	40	Ferrite
SMCC-562X-YY	5600	0.02	5,10,20	30	0.25	0.55	70.0	40	Ferrite
SMCC-682X-YY	6800	0.02	5,10,20	30	0.25	0.50	95.0	35	Ferrite
SMCC-812X-YY	8100	0.02	5,10,20	30	0.25	0.40	95.0	30	Ferrite
SMCC-822X-YY	8200	0.02	5,10,20	30	0.25	0.40	95.0	30	Ferrite
SMCC-103X-YY	10000	0.02	5,10,20	20	0.10	0.35	115.0	25	Ferrite