

EMC Components

SF1 Series

Differential Mode Choke Coils for Signal Line and DC Power Line Pin Terminal For Noise Suppression

FEATURES

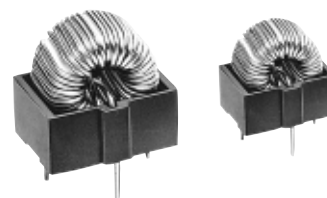
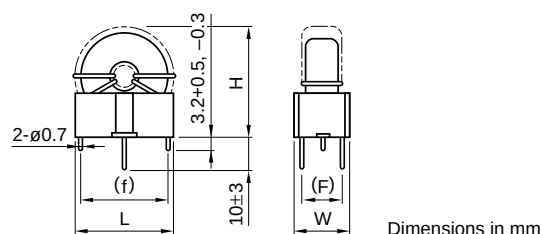
- The SF series chokes feature cores with high saturation magnetic flux density. They thereby provide an effective means of combating pluse EMC.
- By using an advanced amorphous metal alloy core, the SF series are able to provide line noise attenuation performance equivalent to conventional ferrite-based chokes but with far more compact dimensions and fewer coil turns. They can thus be implemented in high-density circuit configurations to comply with various EMC-related regulations.

TYPICAL CHARACTERISTICS OF SF CORE

μ_i [300kHz]	75
$\tan\delta/\mu_i$ [300kHz]	3×10^{-3}
Applicable frequency	10MHz max.
Temperature stability[−20 to +60°C]	5.2%
Bs[24kA/m]	1400mT

SHAPES AND DIMENSIONS/ELECTRICAL CHARACTERISTICS

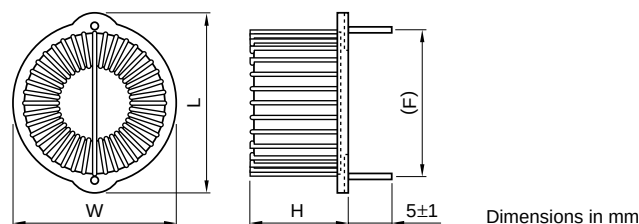
SF1-T SERIES, ON BOARD TYPE WITH BASE (WITH SUPPORT PIN TERMINAL)



Part No.	Rated current (A)max.	Inductance*1 (μH)min.	DC resistance (mΩ)max.	Diameter of winding wire*2 ø(mm)	Dimensions(mm)					Weight (g)
					L max.	W max.	H max.	(F)*3	(f)*3	
SF1-T3-20-03	1	10	40	0.4	10	9.3	9.5	(7.4)	(8.5)	1.3
SF1-T5-30-01	1	30	80	0.4	13.5	9	15	(7.5)	(10)	3
SF1-T5-35-01	1	50	90	0.4	13.5	9	15	(7.5)	(10)	2.6
SF1-T5-40-01	1	80	110	0.4	13.5	9	15.5	(7.5)	(10)	2.7
SF1-T8-30S-01	2	26	55	0.6	18	12.5	18	(9.7)	(14)	5.5
SF1-T8-40S-01	2	46	70	0.6	18	12.5	18	(9.7)	(14)	6
SF1-T8-50S-01	2	72	85	0.6	18	12.5	18	(9.7)	(14)	6.5
SF1-T8-40D-01	2	80	85	0.6	18.5	16	18	(13)	(14)	9
SF1-T8-50D-01	2	125	100	0.6	18.5	16	18	(13)	(14)	9

*1LCR METER: YHP4261A, 1kHz(L ≤ 190μH:70mA, L>190μH:10mA) *2UEW (Grade 1) *3Reference value

SF1-T SERIES, HORIZONTAL ON BOARD TYPE WITH BASE (WITHOUT SUPPORT PIN TERMINAL)



Part No.	Rated current (A)max.	Inductance*1 (μH)min.	DC resistance (mΩ)max.	Diameter of winding wire*2 ø(mm)	Dimensions(mm)				Weight (g)
					L max.	W max.	H max.	(F)*3	
SF1-T5-40-02	1	80	110	0.4	16.3	14	8.9	(12.7)	3.5
SF1-T5-35-02	2	63	75	0.5	16.3	14	8.9	(12.7)	3
SF1-T8-30S-02	2	26	55	0.6	19	17	10.5	(15.2)	5.5
SF1-T8-40S-02	2	46	70	0.6	19	17	10.5	(15.2)	5.6
SF1-T8-50S-02	2	72	85	0.6	19	17	10.5	(15.2)	6
SF1-T10-30-02	3	40	40	0.8	26.5	22	15	(20)	13
SF1-T10-40-02	3	72	50	0.8	26.5	22	15	(20)	14
SF1-T10-50-02	3	110	70	0.8	26.5	22	15	(20)	16
SF1-T12-30-02	5	35	30	1	30	26	16.5	(25)	18.5
SF1-T12-40-02	5	64	40	1	30	26	16.5	(25)	20
SF1-T12-50-02	5	100	50	1	30	26	16.5	(25)	22.5

*1LCR METER: YHP4261A, 1kHz(L ≤ 190μH:70mA, L>190μH:10mA) *2UEW (Grade 1) *3Reference value

EMC Components

SF1 Series

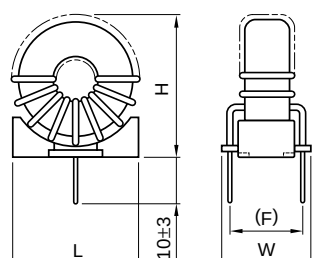
Differential Mode Choke Coils for Signal Line and DC Power Line

Pin Terminal

For Noise Suppression

SHAPES AND DIMENSIONS/ELECTRICAL CHARACTERISTICS

SF1-T SERIES, ON BOARD TYPE WITH BASE (WITHOUT SUPPORT PIN TERMINAL)



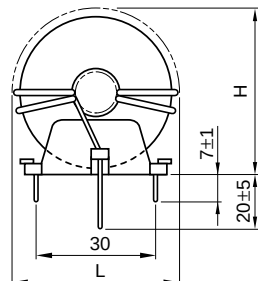
Dimensions in mm



Part No.	Rated current (A)max.	Inductance*1 (μH)min.	DC resistance (mΩ)max.	Diameter of winding wire*2 ø(mm)	Dimensions(mm)				Weight (g)
					L	W	H	(F)*3	
SF1-T10-30-01	3	40	40	0.8	24	18	26	12	13.5
SF1-T10-40-01	3	72	50	0.8	24	18	26	12	14.5
SF1-T10-50-01	3	110	70	0.8	24	18	26	12	16
SF1-T12-30-01	5	35	30	1	26	18	29	12	18
SF1-T12-40-01	5	64	40	1	26	18	29	12	20
SF1-T12-50-01	5	100	50	1	26	18	29	12	23
SF1-300Y10A-01	10	30	10	1.6	33	18	37	12.5	47.5
SF1-800Y10A-01	10	80	16	1.5	33	18	37	12.5	53

*1LCR METER: YHP4261A, 1kHz($L \leq 190\mu\text{H}$:70mA, $L > 190\mu\text{H}$:10mA) *2UEW (Grade 1) *3Reference value

SF1-T SERIES, ON BOARD TYPE WITH BASE (WITH SUPPORT PIN TERMINAL)



Dimensions in mm



Part No.	Rated current (A)max.	Inductance*1 (μH)min.	DC resistance (mΩ)max.	Diameter of winding wire*2 ø(mm)	Dimensions(mm)				Weight (g)
					L	W	H	(F)*3	
SF1-102Y03A-01	3	1000	250	0.8	45	23	47	18	70
SF1-222Y03A-01	3	2200	310	0.8	45	23	47	18	80

*1LCR METER: YHP4261A, 1kHz($L \leq 190\mu\text{H}$:70mA, $L > 190\mu\text{H}$:10mA) *2UEW (Grade 1) *3Reference value

EMC Components

SF1 Series

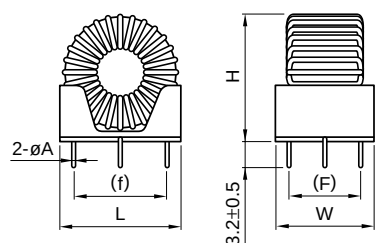
Differential Mode Choke Coils for Signal Line and DC Power Line

Pin Terminal

For Noise Suppression

SHAPES AND DIMENSIONS/ELECTRICAL CHARACTERISTICS

SF1-VT SERIES, ON BOARD TYPE WITH BASE (WITH SUPPORT PIN TERMINAL)



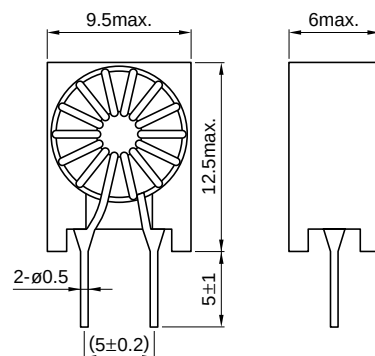
Dimensions in mm



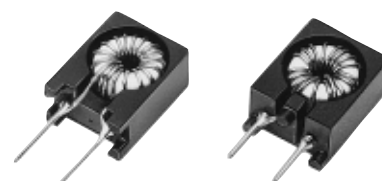
Part No.	Rated current (A)max.	Inductance* ¹ (μH)min.	DC resistance (mΩ)max.	Diameter of winding wire* ² ø(mm)	Dimensions(mm)						Weight (g)
					L max.	W max.	H max.	(F)* ³	(f)* ³	øA	
SF1-VT8-30S	2	26	55	0.6	18	12.5	18	(9.9)	(14)	0.7	6.9
SF1-VT8-40S	2	46	70	0.6	18	12.5	18	(9.9)	(14)	0.7	7
SF1-VT8-50S	2	72	85	0.6	18	12.5	18	(9.9)	(14)	0.7	7.1
SF1-VT8-70LD	2	400	200	0.55	19	18	22	(13)	(14)	0.7	15.8
SF1-VT10-30	3	40	40	0.8	25.5	17	24.5	(12.5)	(20)	1	16.5
SF1-VT10-40	3	72	50	0.8	25.5	17	24.5	(12.5)	(20)	1	16.6
SF1-VT10-50	3	110	70	0.8	25.5	17	24.5	(12.5)	(20)	1	16.7
SF1-VT12-30	5	35	30	1	26	17	29	(12.5)	(20)	1	21.4
SF1-VT12-40	5	64	40	1	26	17	29	(12.5)	(20)	1	21.5
SF1-VT12-50	5	100	50	1	26	17	29	(12.5)	(20)	1	21.6

*¹LCR METER: YHP4261A, 1kHz(L ≤ 190μH:70mA, L > 190μH:10mA) *²UEW (Grade 1) *³Reference value

SF1-T SERIES



Dimensions in mm



Part No.	Rated current (A)max.	Inductance* ¹ (μH)min.	DC resistance (mΩ)max.	Diameter of winding wire* ² ø(mm)	Weight (g)
SF1-T3-20-01	1	10	45	0.4	1.3

*¹LCR METER: YHP4261A, 1kHz(L ≤ 190μH:70mA, L > 190μH:10mA) *²UEW (Grade 1)