

TPL Series

SMD Inductor for Power/Signal Line

FEATURES

- These miniature chip inductors wound on a special ferrite core.
- Low DC resistance, large current and high impedance characteristics.
- Ideal choke coil for DC power supply circuits.
- Excellent thermal resistance for re-flow soldering process.



APPLICATIONS

- DC power supply circuit for Pagers, Cordless phones, Hi-Frequency Communication Products, PCs, Disk Drives and computer peripherals, Digital Cameras and other electronic equipments.

PRODUCT IDENTIFICATION

TPL 321618 HC - 100 M - T

(1) (2) (3) (4) (5) (6)

(1) Product name

(2) Shapes and Dimensions (LxWxT)

321618 : 3.2x1.6x1.8 mm

(3) Type name : HC (for power) , HS(for signal)

(4) Inductance

R47 : 0.47uH ; 100 : 10uH

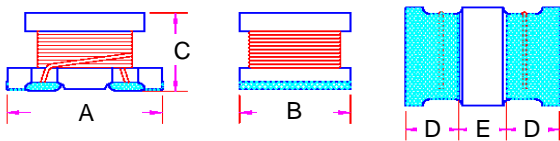
(5) Tolerance

J : $\pm 5\%$; K : $\pm 10\%$; M : $\pm 20\%$

(6) Taping style

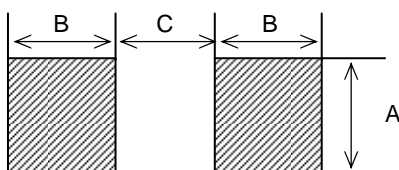
T : Taping ; None : Bulk

SHAPES AND DIMENSIONS (mm)



Item	A	B	C	D	E
322515HC	3.2 ± 0.3	2.5 ± 0.2	1.55 ± 0.3	0.7 min	0.7 min
321618HC	3.2 ± 0.3	1.6 ± 0.2	1.8 ± 0.3	0.7 min	0.7 min
322520(HC/HS)	3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.3	0.7 min	0.7 min
453226(HC/HS)	4.5 ± 0.3	3.2 ± 0.2	2.6 ± 0.3	1.0 min	1.0 min
575047HC	5.7 ± 0.3	5.0 ± 0.3	4.7 ± 0.3	1.3 min	1.7 min

RECOMMENDED FOOTPRINT (mm)



Item	A	B	C
322515HC	2	1.5	1
321618HC	1.5	1.5	1
322520(HC/HS)	2	1.5	1
453226(HC/HS)	3	2	1.2
575047HC	5	2	2

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ELECTRICAL CHARACTERISTICS

TPL322515HC

EMTEK Part Number	Inductance		DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(uH)/1MHz/0.1V	*Tolerance			
TPL322515HC-1R0□-T	1.0	M	0.078	100	1000
TPL322515HC-2R2□-T	2.2	M	0.126	64	790
TPL322515HC-4R7□-T	4.7	M	0.195	43	650
TPL322515HC-100□-T	10	K	0.42	26	400
TPL322515HC-150□-T	15	K	0.75	22	300
TPL322515HC-220□-T	22	K	2.20	19	250
TPL322515HC-330□-T	33	K	2.50	17	200
TPL322515HC-470□-T	47	K	2.75	13	170
TPL322515HC-680□-T	68	K	3.60	9	130
TPL322515HC-101□-T	100	K	4.5	8	100

TPL321618HC

EMTEK Part Number	Inductance		DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(uH)/MHz/1V	*Tolerance			
TPL321618HC-56N□-TPF	0.056/100	K	0.080	400	1000
TPL321618HC-R10□-TPF	0.10/100	K	0.100	300	970
TPL321618HC-R12□-TPF	0.12/1	K	0.112	250	970
TPL321618HC-R22□-TPF	0.22/1	K	0.140	250	850
TPL321618HC-R47□-TPF	0.47/1	K	0.210	180	700
TPL321618HC-R68□-TPF	0.68/1	K	0.250	150	600
TPL321618HC-1R0□-TPF	1.0/1	K	0.364	100	510
TPL321618HC-2R2□-TPF	2.2/1	K	0.533	115	430
TPL321618HC-4R7□-TPF	4.7/1	K	0.845	31	340
TPL321618HC-100□-TPF	10/1	K	1.690	20	230
TPL321618HC-220□-TPF	22/1	K	3.900	14	160
TPL321618HC-330□-TPF	33/1	K	4.700	12	130
TPL321618HC-470□-TPF	47/1	K	10.40	10	100
TPL321618HC-101□-TPF	100/1	K	15.60	7	80

TPL322520HC

EMTEK Part Number	Inductance		DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(uH)/1MHz/1V	*Tolerance			
TPL322520HC-1R0□-T	1.0	K, J, M	0.078	100	1000
TPL322520HC-2R2□-T	2.2	K, J, M	0.126	64	790
TPL322520HC-4R7□-T	4.7	K, J, M	0.195	43	450
TPL322520HC-100□-T	10	K, J, M	0.572	26	300
TPL322520HC-220□-T	22	K, J, M	0.923	19	250
TPL322520HC-470□-T	47	K, J, M	1.69	12	170
TPL322520HC-101□-T	100	K, J, M	4.55	8	100
TPL322520HC-221□-T	220	K, J, M	10.92	5.5	70
TPL322520HC-331□-T	330	K, J, M	13.0	4.5	60
TPL322520HC-391□-T	390	K, J, M	22.1	4.0	60
TPL322520HC-471□-T	470	K, J, M	24.7	3.7	60
TPL322520HC-561□-T	560	K, J, M	28.6	3.4	60

* □ : Please specify the inductance tolerance, J($\pm 5\%$), K($\pm 10\%$), M($\pm 20\%$)

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ELECTRICAL CHARACTERISTICS

TPL453226HC

EMTEK Part Number	Inductance		Test Freq. (1V)	DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(μ H)	*Tolerance				
TPL453226HC-1R0□-T	1.0	K, J	1MHz	0.08	100	1080
TPL453226HC-1R5□-T	1.5	K, J	1MHz	0.09	85	1000
TPL453226HC-2R2□-T	2.2	K, J	1MHz	0.11	60	900
TPL453226HC-3R3□-T	3.3	K, J	1MHz	0.13	47	800
TPL453226HC-4R7□-T	4.7	K, J	1MHz	0.15	35	750
TPL453226HC-6R8□-T	6.8	K, J	1MHz	0.20	30	720
TPL453226HC-100□-T	10	K, J	1MHz	0.24	23	650
TPL453226HC-150□-T	15	K, J	1MHz	0.32	20	570
TPL453226HC-220□-T	22	K, J	1MHz	0.60	15	420
TPL453226HC-330□-T	33	K, J	1MHz	1.00	12	310
TPL453226HC-470□-T	47	K, J	1MHz	1.10	10	280
TPL453226HC-680□-T	68	K, J	1MHz	1.70	8.4	220
TPL453226HC-101□-T	100	K, J	1MHz	2.20	6.8	190
TPL453226HC-151□-T	150	K, J	1MHz	3.50	5.5	130
TPL453226HC-221□-T	220	K, J	1MHz	4.0	4.5	110
TPL453226HC-331□-T	330	K, J	1MHz	6.8	3.6	100
TPL453226HC-471□-T	470	K, J	1kHz/0.25V	8.5	3.0	90

TPL575047HC

EMTEK Part Number	Inductance		Test Freq.	DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(μ H)	*Tolerance				
TPL575047HC-R12□-T	0.12	K	1 MHz	0.0098	450	6000
TPL575047HC-R27□-T	0.27	K	1 MHz	0.0140	300	5300
TPL575047HC-R47□-T	0.47	K	1 MHz	0.0182	200	4800
TPL575047HC-1R0□-T	1	K	1 MHz	0.027	150	4000
TPL575047HC-1R5□-T	1.5	K	1 MHz	0.031	110	3700
TPL575047HC-2R2□-T	2.2	K	1 MHz	0.041	80	3200
TPL575047HC-3R3□-T	3.3	K	1 MHz	0.050	40	2900
TPL575047HC-4R7□-T	4.7	K	1 MHz	0.0574	30	2700
TPL575047HC-6R8□-T	6.8	K	1 MHz	0.104	25	2000
TPL575047HC-100□-T	10	K	1 MHz	0.130	20	1700
TPL575047HC-150□-T	15	K	1 MHz	0.210	17	1400
TPL575047HC-220□-T	22	K	1 MHz	0.266	15	1200
TPL575047HC-330□-T	33	K	1 MHz	0.448	12	900
TPL575047HC-470□-T	47	K	1 MHz	0.560	10	800
TPL575047HC-680□-T	68	K	1 MHz	0.938	7.6	640
TPL575047HC-101□-T	100	K	100kHz	1.20	6.5	560
TPL575047HC-151□-T	150	K	100kHz	2.66	5.0	420
TPL575047HC-221□-T	220	K	100kHz	3.36	4.0	320
TPL575047HC-331□-T	330	K	100kHz	6.16	3.1	270
TPL575047HC-471□-T	470	K	100kHz	7.56	2.4	240
TPL575047HC-681□-T	680	K	100kHz	11.34	1.9	190
TPL575047HC-102□-T	1000	K	10kHz	14.42	1.7	150
TPL575047HC-222□-T	2200	K	10kHz	30.10	1.2	100
TPL575047HC-472□-T	4700	K	10kHz	61.04	0.8	70
TPL575047HC-103□-T	10000	K	10kHz	140	0.5	50

* □ : Please specify the inductance tolerance, J(\pm 5%), K(\pm 10%), M(\pm 20%)

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ELECTRICAL CHARACTERISTICS

TPL322520HS

EMTEK Part Number	Inductance		Quality Factor		DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(uH)/1MHz	*Tolerance	Q	Test Freq.			
TPL322520HS-R10□-T	0.10	M	20	25.2MHz	0.25	200	700
TPL322520HS-R18□-T	0.18	M	20	25.2MHz	0.25	200	650
TPL322520HS-R27□-T	0.27	M	25	25.2MHz	0.25	200	600
TPL322520HS-R39□-T	0.39	M	25	25.2MHz	0.25	200	530
TPL322520HS-R56□-T	0.56	M	30	25.2MHz	0.25	160	530
TPL322520HS-R68□-T	0.68	M	30	25.2MHz	0.25	160	470
TPL322520HS-R82□-T	0.82	M	30	25.2MHz	0.3	120	450
TPL322520HS-1R0□-T	1.0	M	20	1MHz	0.5	100	445
TPL322520HS-1R2□-T	1.2	M	20	1MHz	0.6	100	425
TPL322520HS-1R5□-T	1.5	M, K	20	1MHz	0.6	75	400
TPL322520HS-1R8□-T	1.8	M, K	20	1MHz	0.7	60	390
TPL322520HS-2R2□-T	2.2	M, K	20	1MHz	0.8	50	370
TPL322520HS-2R7□-T	2.7	M, K	20	1MHz	0.9	43	320
TPL322520HS-3R3□-T	3.3	M, K	20	1MHz	1.0	38	300
TPL322520HS-3R9□-T	3.9	M, K	20	1MHz	1.1	35	290
TPL322520HS-4R7□-T	4.7	M, K	20	1MHz	1.2	31	270
TPL322520HS-5R6□-T	5.6	M, K	20	1MHz	1.3	28	250
TPL322520HS-6R8□-T	6.8	M, K	20	1MHz	1.5	25	240
TPL322520HS-8R2□-T	8.2	M, K	20	1MHz	1.6	23	225
TPL322520HS-100□-T	10	K, J	35	1MHz	1.8	20	190
TPL322520HS-120□-T	12	K, J	35	1MHz	2.0	18	180
TPL322520HS-150□-T	15	K, J	35	1MHz	2.2	16	170
TPL322520HS-180□-T	18	K, J	35	1MHz	2.5	15	165
TPL322520HS-220□-T	22	K, J	35	1MHz	2.8	14	150
TPL322520HS-270□-T	27	K, J	35	1MHz	3.1	13	125
TPL322520HS-330□-T	33	K, J	40	1MHz	3.5	12	115
TPL322520HS-390□-T	39	K, J	40	1MHz	3.9	11	110
TPL322520HS-470□-T	47	K, J	40	1MHz	4.3	11	100
TPL322520HS-560□-T	56	K, J	40	1MHz	4.9	10	85
TPL322520HS-680□-T	68	K, J	40	1MHz	5.5	9.0	80
TPL322520HS-820□-T	82	K, J	40	1MHz	6.2	8.5	70
TPL322520HS-101□-T	100	K, J	40	796KHz	7.0	8.0	80
TPL322520HS-121□-T	120	K, J	40	796KHz	8.0	7.5	75
TPL322520HS-151□-T	150	K, J	40	796KHz	9.3	7.0	70
TPL322520HS-181□-T	180	K, J	40	796KHz	10.2	6.0	65
TPL322520HS-221□-T	220	K, J	40	796KHz	11.8	5.5	65
TPL322520HS-271□-T	270	K, J	40	796KHz	12.5	5.0	65
TPL322520HS-331□-T	330	K, J	40	796KHz	15.0	5.0	65
TPL322520HS-391□-T	390	K, J	50	796KHz	22.0	5.0	50
TPL322520HS-471□-T	470	K, J	50	796KHz	25.0	5.0	45
TPL322520HS-561□-T	560	K, J	50	796KHz	28.0	5.0	40

* □ : Please specify the inductance tolerance, J($\pm 5\%$), K($\pm 10\%$), M($\pm 20\%$)

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ELECTRICAL CHARACTERISTICS

TPL453226HS

EMTEK Part Number	Inductance		Quality Factor		DCR (Ω) Max.	SRF (MHz) min.	Rated DC Current (mA) Max.
	(uH)/MHz	*Tolerance	Q	Test Freq.			
TPL453226HS-1R0□-T	1.0/1	M	20	1MHz	0.20	120	500
TPL453226HS-1R2□-T	1.2/1	M	20	1MHz	0.20	100	500
TPL453226HS-1R5□-T	1.5/1	M	20	1MHz	0.30	85	500
TPL453226HS-1R8□-T	1.8/1	M	20	1MHz	0.30	75	500
TPL453226HS-2R2□-T	2.2/1	M	20	1MHz	0.30	62	500
TPL453226HS-2R7□-T	2.7/1	M	20	1MHz	0.32	53	500
TPL453226HS-3R3□-T	3.3/1	M	20	1MHz	0.35	47	500
TPL453226HS-3R9□-T	3.9/1	M	20	1MHz	0.38	41	500
TPL453226HS-4R7□-T	4.7/1	M, K	30	1MHz	0.40	38	500
TPL453226HS-5R6□-T	5.6/1	M, K	30	1MHz	0.47	33	500
TPL453226HS-6R8□-T	6.8/1	M, K	30	1MHz	0.50	31	450
TPL453226HS-8R2□-T	8.2/1	M, K	30	1MHz	0.56	27	450
TPL453226HS-100□-T	10/1	K, J	35	1MHz	0.56	23	400
TPL453226HS-120□-T	12/1	K, J	35	1MHz	0.62	21	380
TPL453226HS-150□-T	15/1	K, J	35	1MHz	0.73	19	360
TPL453226HS-180□-T	18/1	K, J	35	1MHz	0.82	17	340
TPL453226HS-220□-T	22/1	K, J	35	1MHz	0.94	15	320
TPL453226HS-270□-T	27/1	K, J	35	1MHz	1.1	14	300
TPL453226HS-330□-T	33/1	K, J	35	1MHz	1.2	12	270
TPL453226HS-390□-T	39/1	K, J	35	1MHz	1.4	11	240
TPL453226HS-470□-T	47/1	K, J	35	1MHz	1.5	10	220
TPL453226HS-560□-T	56/1	K, J	35	1MHz	1.7	9.3	200
TPL453226HS-680□-T	68/1	K, J	35	1MHz	1.9	8.4	180
TPL453226HS-820□-T	82/1	K, J	35	1MHz	2.2	7.5	170
TPL453226HS-101□-T	100/1	K, J	40	796KHz	2.5	6.8	160
TPL453226HS-121□-T	120/1	K, J	40	796KHz	3	6.2	150
TPL453226HS-151□-T	150/1	K, J	40	796KHz	3.7	5.5	130
TPL453226HS-181□-T	180/1	K, J	40	796KHz	4.5	5	120
TPL453226HS-221□-T	220/1	K, J	40	796KHz	5.4	4.5	110
TPL453226HS-271□-T	270/1	K, J	40	796KHz	6.8	4.0	100
TPL453226HS-331□-T	330/1	K, J	40	796KHz	8.2	3.6	95
TPL453226HS-391□-T	390/1	K, J	40	796KHz	9.7	3.3	90
TPL453226HS-471□-T	470/1KHz	K, J	40	796KHz	11.8	3.0	80
TPL453226HS-561□-T	560/1KHz	K, J	40	796KHz	14.5	2.7	70
TPL453226HS-681□-T	680/1KHz	K, J	40	796KHz	17.0	2.5	65
TPL453226HS-821□-T	820/1KHz	K, J	40	796KHz	20.5	2.2	60
TPL453226HS-102□-T	1000/1KHz	K, J	40	252KHz	25.0	2.0	50
TPL453226HS-122□-T	1200/1KHz	K, J	40	252KHz	30.0	1.8	45
TPL453226HS-152□-T	1500/1KHz	K, J	40	252KHz	37.0	1.6	40
TPL453226HS-182□-T	1800/1KHz	K, J	40	252KHz	45.0	1.5	35
TPL453226HS-222□-T	2200/1KHz	K, J	40	252KHz	50.0	1.3	30

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TEST EQUIPMENT :

- L & Q : HP 4284A (Test Freq. \leq 1MHz), HP 4287(Test Freq. $>$ 1MHz) Precision LCR METER, or equivalent
- SRF : Agilent E4991A RF Impedance Analyzer
- RDC : MILLI OHM METER 16502 , or equivalent
- Electrical specification at 25°C

SPECIFICATIONS

- Operating Temperature : - 25 °C ~ + 85 °C
- Rated Current : Based on the temperature rise not exceeding 20° and inductance is 90% lower than its normal value.

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