

FrelTec GmbH

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Wire Wound Ceramic Chip Inductors SMD

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SMD Wire Wound Ceramic Chip Inductors

SPECIFICATION

Part Number

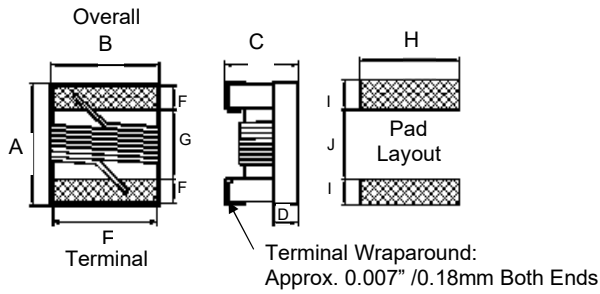
091	02*	101*	J*	T05**	—
Type	Size	Value	Tolerance	Packing	Option
091 : SMD Wire Wound Ceramic Chip Inductor	02 : 0402	The value is given in nH and "N" indicates the decimal point. When higher than 100nH then the last digit is the multiplier	C : $\pm 0,2\text{nH}$		S: HP4287
	03 : 0603	which denotes the number of zero following	D : $\pm 0,5\text{nH}$	T04: Tape and reel; for 4k pc available for 0402 and 0603 (7"reel)	H : High Current and High Q
	05 : 0805	Example:	G : $\pm 2\%$	E02: Embossed tape and reel; for 2k pc available for 0805, 1206 and 1008 (7"reel)	Q: High Q, Low DCR
	06 : 1206	3N3 : 3,3 nH	H : $\pm 3\%$		
	A8 : 1008	22N : 22 nH	J : $\pm 5\%$		
		151 : 150 nH	K : $\pm 10\%$		
				* not all combination is possible	

All products according to RoHS (2015/863/EU)

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Dimensions and recommended PCB pattern for reflow soldering:



Standard

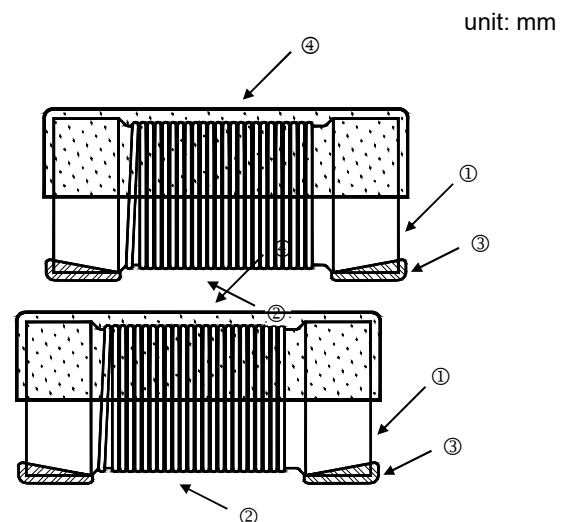
Size	A max.	B max.	C max.	D Ref.	E	F	G	H	I	J
0402	1,27	0,76	0,61	0,15	0,51	0,23	0,56	0,66	0,50	0,46
0603	1,80	1,12	1,02	0,38	0,76	0,33	0,86	1,02	0,64	0,64
0805	2,29	1,73	1,52	0,51	1,27	0,44	1,02	1,78	1,02	0,76
1008	2,92	2,79	2,13	0,65	2,03	0,51	1,52	2,54	1,02	1,27
1206	3,45	2,16	1,52	0,51	1,62	0,51	2,20	1,93	1,02	1,80

High Current / High Q

Size	A max.	B max.	C max.	D Ref.	E	F	G	H	I	J
0402	1,27	0,76	0,61	0,15	0,51	0,23	0,56	0,66	0,50	0,46
0603	1,80	1,12	1,02	0,38	0,76	0,33	0,86	1,02	0,64	0,64
0805	2,29	1,73	1,52	0,51	1,27	0,44	1,02	1,78	1,02	0,76
1008	2,92	2,79	2,03	0,65	2,03	0,51	1,52	2,54	1,02	1,27

Construction

①	Ceramic Core	③	Electrode (Ag/Pd+Ni+Sn)
②	Magnet Wire	④	UV Glue



Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	900MHz		1,7GHz		
								L	Q	L	Q	
0402	1,0	±10%	250	16	12,70	0,045	1360	1,02	77	1,02	69	
	1,9			16	11,30		1040	1,72	68	1,74	82	
	2,0			16	11,10			1,93	54	1,93	75	
	2,2			19	10,80		960	2,19	59	2,23	100	
	2,4			15	10,50			790	2,24	51	2,27	68
	2,7	±5, ±10%		16	10,40	0,120	640	2,23	42	2,25	61	
	3,3			19	7,00	0,066	840	3,10	65	3,12	87	
	3,6			19	6,80			3,56	45	3,62	71	
	3,9			19	5,80			3,89	50	4,00	75	
	4,3			18	6,00	0,091	700	4,19	47	4,30	71	
	4,7			18	4,70	0,130	640	4,55	48	4,68	68	
	5,1			±2, ±5, ±10%	20	4,80	0,083	800	5,15	56	5,25	82
	5,6				20	4,80		760	5,16	54	5,28	81
	6,2			±5, ±10%	20	4,80	0,104	760	6,16	52	6,37	76
	6,8				20	4,80			6,56	63	6,93	78
	7,5	±2, ±5, ±10%		22	4,80	0,104	680	7,91	60	8,22	88	
	8,2			22	4,40			8,50	57	8,85	84	
	8,7	±5, ±10%		18	4,10	0,200	480	8,78	54	9,21	73	
	9,0			22	4,16	0,104	680	9,07	62	9,53	78	
	9,5	±2, ±5, ±10%		18	4,00	0,200	480	9,42	54	9,98	69	
	10			21	3,90	0,195		9,80	50	10,10	67	
	11	±5, ±10%		24	3,68	0,120	640	10,70	52	11,20	78	
	12			24	3,60			11,90	53	12,70	71	
	13	±2, ±5, ±10%		24	3,45	0,210	440	13,40	51	14,60	57	
	15			24	3,28	0,172	560	14,60	55	15,50	77	
	16	24		3,10	0,220	16,60		46	18,80	47		
	18	±5, ±10%		25	3,10	0,230	420	18,30	57	20,30	62	
	19			24	3,04	0,202	480	19,10	50	21,10	67	
	20	±2, ±5, ±10%		25	3,00	0,250	420	20,70	52	23,70	53	
	22			25	2,80	0,300	400	23,20	53	26,80	53	
	23	24		2,72	23,80			49	26,90	64		
	24	25		2,70	25,10			51	29,50	50		
	27	24		2,48	28,70			49	33,50	63		
	30	±5, ±10%		25	2,35	0,350	400	31,10	46	38,50	39	
	33			24	2,35	0,350		34,90	31	41,70	32	
	36	±2, ±5, ±10%		24	2,32	0,440	320	39,50	44	48,40	53	
	39			25	2,10	0,550	200	41,70	47	50,20	45	
	40	±5, ±10%		24	2,24	0,500	320	39,00	44	47,40	33	
	43			25	2,03	0,810	100	45,80	46	61,60	34	
	47	±2, ±5, ±10%		25	2,10	0,830	150	50,00	38	55,80	37	
51	25		1,75	0,820	100	50,40	47	59,40	37			
56	25	1,76	0,970	57,40		49	72,40	40				
62	22	1,62	1,120	66,80		43	89,30	37				
68	±5, ±10%	22	1,62	1,120	50	69,60	45	83,40	38			
82		22	1,26	1,550		-	-	-	-			
100	±2, ±5, ±10%	22	1,16	2,000	30	-	-	-	-			
120		20	>1,80	2,660	50	-	-	-	-			

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Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	900MHz		1,7GHz		
								L	Q	L	Q	
0603	1,6	±5, ±10%	250	24	12,5	0,030	700	1,53	35	1,58	55	
	1,8			16		0,045		1,63	35	1,66	50	
	2,2			15		6,00		0,100	2,18	41	2,20	64
	2,3			16	>4,00	0,140		2,32	32	2,35	40	
	3,3			22	>6,00	0,080		3,35	47	3,40	65	
	3,6			22	5,80	0,063		3,53	49	3,58	65	
	3,9			22	>6,00	0,080		3,95	49	3,96	67	
	4,3			22	5,80	0,063		4,32	49	4,43	67	
	4,5			20		0,120		4,74	55	4,87	92	
	4,7			25		0,160		4,65	53	4,80	67	
	5,1			20		0,170		5,13	47	5,36	56	
	5,6			20		0,110		5,53	56	5,86	77	
	6,2			25				6,28	60	6,40	85	
	6,3			25				6,67	41	6,86	61	
	6,8			27		4,80		6,75	60	7,10	81	
	7,5			28				0,106	7,70	60	7,82	65
	8,2			27				0,110	8,25	64	8,40	81
	8,7	28		0,109	8,86			62	9,32	58		
	9,1	35		0,130	9,20			70	9,70	80		
	9,5	28		5,40	9,70			59	9,92	61		
	10	31		4,80	10,0			66	10,6	83		
	11	31		0,086	11,3			53	12,1	56		
	12	35		4,00	12,3			72	13,5	83		
	15	35		0,170	15,4			64	16,8	89		
	16	35		3,30	16,5	55		18,0	52			
	17	35		3,20	17,6	56		19,4	44			
	18	35		3,10	18,7	70		21,4	69			
	20	40		3,00	20,7	80		23,5	30			
	22	38			0,190	22,8		73	26,1	71		
	23	38			2,85	24,1		71	28,0	71		
	24	38			2,80	25,7		45	30,9	40		
	27	40			2,80	29,2		74	34,6	65		
	30	40			2,80	31,4		47	39,8	28		
	33	40			0,220	36,0		67	49,5	42		
	36	37			2,30	39,1		47	48,9	24		
	39	40			2,20	42,7		60	60,2	40		
	43	38			0,250	46,9		44	60,3	21		
	47	38		2,00	52,2	62		77,2	35			
	51	38		0,280	55,5	69		82,2	34			
	56	38		1,90	62,5	56		97,0	26			
	62	37		1,80	68,0	40		110	10			
	68	37		0,340	80,5	54		168	21			
	72	34		1,70	82,0	53		135	20			
	82				0,490	82,0		53	135	20		
	91				0,540	96,2		54	177	21		
	100	30		0,500	110,0	50		416,4	6			
	110	34		1,40	124,0	49		319,5	13			
120	32	1,35	138,0	43	342,7	15						
130	32	1,30	166,0	39	529,3	8						
140	30	1,40	185,0	60	-	-						
150	28	1,30	190,0	80	-	-						
160	28		0,870	190,0	80	-	-					
180	25		0,950	230,0	25	-	-					
220	25	1,25	215,0	20	-	-						
260	25	1,20	305,0	22	-	-						
270	25	1,00	377,0	21	-	-						
280	25	1,00	469,0	21	-	-						
300	25	0,90	523,0	19	-	-						
330	25	1,00	524,0	18	-	-						
390	25	0,75	539,7	21	-	-						
470	25	0,90	680,4	20	-	-						
	25	4,350	734,5	29	-	-						
	23	0,60	-	-	-	-						

Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.			
0805	2,7	±5, ±10%	250	80 @ 1500MHz	7,900	0,06	800			
	2,8			0,06						
	3,0			0,06						
	3,3			6,000	0,08	600				
	3,9				0,08					
	4,3				0,08					
	4,7			5,500	0,08					
	5,6				0,08					
	6,2				0,11					
	6,8			0,11						
	7,5			4,500	0,14					
	8,2				0,12					
	8,7				0,21					
	10			±2, ±5, ±10%	200		60 @ 500MHz	4,200	0,10	600
	12						4,000	0,15		
	15	3,400	0,17							
	18	2,600	0,20				500			
	20		0,22							
	22		0,22							
	24	2,000	0,22							
	27		0,25							
	30		0,25							
	33	2,050	0,27							
	36		0,27							
	39		0,29							
	43	1,650	0,34							
	47		0,31							
	56		0,34							
	68	1,450	0,38							
	72		0,40							
	75		0,41							
	82	1,300	0,42	400						
	91		0,48							
	100		0,46							
	110	1,000	0,48							
	120		0,51							
	130		0,54							
	150	0,920	0,56							
	160		0,60							
	180		0,64							
	200	0,860	0,66							
	220		0,70							
	240		0,690		350					
	250	0,680								
	270	0,650								
300	0,620	1,20	330							
330		0,600	1,40	310						
360		0,580	1,45	300						
390	0,560	1,50	290							
430		0,430	1,70	230						
470		0,375	1,70	250						
510	0,340	1,90	230							
560		0,340	1,90	230						
600		0,260	1,60	450						
620	0,220	2,20	210							
680		2,20	190							
750		0,200	2,30	180						
820	0,200	2,35	180							
820		2,50	170							
1000		0,100	2,50	170						

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	1200		7,9	18 @ 25MHz		2,50		
	1500			16 @ 25MHz		2,50		
	1800			16 @ 7,9MHz	0,080	2,50		
	2200				0,060	2,70		160
	2700				0,050	3,10		150
	3300			15 @ 7,9MHz	0,040	4,40		90
	3900					4,41		
	4700					6,40		
1008	4,7	$\pm 5, \pm 10\%$	50	50 @ 1500MHz	4,000	0,15	1000	
	*5,6			50 @ 500MHz	4,100	0,08		
	*10				3,300	0,09		
	*12				2,500	0,11		
	*15			50 @ 350MHz	2,400	0,12		
	*18				2,400	0,12		
	*22			55 @ 350MHz	1,900	0,13		
	24				1,600	0,13		
	*27				1,600	0,14		
	30			60 @ 350MHz	1,600	0,14		
	*33				1,600	0,15		
	36				1,500	0,15		
	*39			65 @ 350MHz	1,500	0,16		
	*47				1,300	0,18		
	*56				1,250	0,20		
	*62			60 @ 350MHz	1,300	0,20		
	*68				1,100	0,21		
	75			50 @ 350MHz	1,000	0,22		
	*82				1,000	0,45		
	91				1,000	0,56		
	*100			60 @ 350MHz	0,950	0,63		650
	*120				0,850	0,70		800
	*150			45 @ 100MHz	0,800	0,75		650
	160				0,750	0,77		620
	*180				0,700	0,84		500
	*220			45 @ 100MHz	0,650	0,88		690
	*240				0,600	0,91		450
	*270				0,585	1,00		470
	*300			45 @ 100MHz	0,570	1,10		630
	*330				0,530	1,12		470
	*360				0,500	1,15		580
	*390			35 @ 50MHz	0,480	1,19		300
	*430				0,450	1,33		540
	*470				0,415	1,40		360
	*560			28 @ 50MHz	0,375	1,47		400
	*620				0,375	1,54		380
	*680				0,360	1,68		370
	*750			22 @ 25MHz	0,350	2,00		310
	*820				0,320	2,30		330
	*910				0,290	2,60		300
	*1000			18 @ 25MHz	0,250	2,80		280
	*1200				0,200	3,20		290
	*1500				0,160	3,40		260
	*1800			16 @ 7,96MHz	0,160	4,00		240
	*2200				0,140	4,00		
	*2700				0,110			
	*3300				0,100			
*3900		0,090						
*4700		0,020						
5600								

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	6800			15 @ 7,96MHz	0,040	4,90	200
	8200				0,025	6,00	170
	10000				0,020	9,00	150
	12000				0,018	10,5	130
	15000				0,015	11,5	120
		2,52					

"*" Test Methods / Instrument : Network / Spectrum Analyzer

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Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	
1008 S-Type	10	$\pm 2, \pm 5, \pm 10\%$	50	50 @ 500MHz	4,100	0,08	1000	
	12				3,300	0,09		
	18				2,400	0,12		
	22			50 @ 350MHz	2,400	0,12		
	27				1,600	0,13		
	30				1,600	0,14		
	33			60 @ 350MHz	1,600	0,14		
	39				1,500	0,15		
	43				1,500	0,16		
	47			65 @ 350MHz	1,500	0,16		
	56				1,300	0,18		
	62				1,250	0,20		
	68			60 @ 350MHz	1,300	0,20		
	82				1,000	0,22		
	100				1,000	0,56		
	120			25	0,950	0,63		650
	150				0,850	0,70		800
	180				0,750	0,77		620
	220		45 @ 100MHz	0,700	0,84	500		
	240			0,650	0,88	690		
	270			0,600	0,91			
	300			0,585	1,00	450		
	330			0,570	1,05	470		
	360			0,530	1,10			
	390			0,500	1,12			
	430			0,480	1,15	630		
	470			0,450	1,19			
	560			0,415	1,33	580		
	620			0,375	1,40	300		
	680			0,375	1,47	540		
	750		0,360	1,54	360			
	820		0,350	1,61	400			
1000	35 @ 50MHz	0,290	1,75	370				
1200		0,250	2,00	310				
1800		28 @ 50MHz	0,160	2,60	300			
2200	0,160		2,80	280				
			7.9					

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Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.		
1206	6,8	$\pm 5, \pm 10\%$	100	30 @ 300MHz	5,50	0,07	1000		
	10			40 @ 300MHz	4,00	0,08			
	12				3,20	0,08			
	15			50 @ 300MHz	3,20	0,10			
	18				2,80				
	22				2,20				
	24			$\pm 2, \pm 5, \pm 10\%$	50	2,00		0,11	
	27					1,80			
	33					1,80			0,11
	39					1,80			0,12
	47	1,50	0,13						
	56	1,45	0,14						
	62	55 @ 300MHz	1,20			0,20			
	68		1,20			0,26			
	82	60 @ 300MHz	1,20			0,21			
	91		1,10			0,24			
	100	35	45 @ 150MHz	1,10	0,26				
	120			0,75	0,26				
	150			0,95	0,31				
	180			0,90	0,43				
	220			55 @ 300MHz	0,76	0,50			
	270			50 @ 150MHz	0,74	0,56			
	300				0,68	0,60			
	330			0,65	0,62				
	360			0,60	0,65				
	390			0,60	0,75				
	470	0,55	1,30						
	560	0,47	1,34						
	620	0,47	1,58						
	680	0,45	1,58						
	750	0,44	2,25						
	820	0,42	1,82						
910	0,41	2,95							
1000	0,40	2,80							
1200	0,38	3,20							

High Current Type Electrical Specifications

Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.	SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.
0603 High Current	1,6	±5, ±10%	250	24	12,50	0,030	2400
	3,6				5,90	0,048	2300
	3,9			0,054		2100	
	6,8				5,80		
	7,5			3,70	0,059		
	8,2	0,060					
	10	0,071					
	12	3,00		2000			
	15						
	18	2,80		1900			
	22						
	24	42		2,40	0,099	1800	
					0,105		

High Q Electrical Specifications:

Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Quality Factor min.		SRF (GHz) min.	DCR (Ω) max.	IDC (mA) max.	
				900MHz	1.7GHz				
0402 High Q	1,0	±0,2nH, ±0,5nH, ±5%, ±10%	250	46	75	16,0	0,030	2300	
	2,0			58	85	15,2	0,038	2100	
	2,2			60	86	15,1	0,038	2100	
	2,4			60	83	14,0	0,042	2000	
	2,7			62	85	13,0	0,075	1500	
	3,3			66	95	12,8	0,045	1700	
	3,6			65	94	11,7	0,045	1700	
	3,9			64	98	9,50	0,045	1700	
	4,3			±0,5nH, ±5%, ±10%	63	90	7,15	0,050	1600
	4,7				58	83	6,85	0,070	1500
	5,1	±2%, ±5%, ±10%		54	76	6,80	0,115	1200	
	5,6			73	105	6,50	50	1600	
	6,2			73	100	5,80	0,055	1600	
	6,8			68	94	5,80	0,065	1500	
	7,5			60	82	5,40	0,090	1400	
	8,2			68	95	5,40	0,065	1500	
	8,7			68	95	5,00	0,065	1500	
	9,0			67	92	5,00	0,080	1400	
	9,5			64	90	4,70	0,090	1400	
	10			62	90	4,70	0,100	1300	
	11	68		98	4,70	0,065	1400		
	12	66		100	4,40	0,100	1200		
	13	62		82	4,20	0,150	870		
	15	62		85	3,90	0,110	1100		
	16	57		77	3,70	0,140	850		
	18	58		74	3,55	0,120	900		
	19	61		88	3,50	0,145	850		
	20	58		76	3,50	0,185	780		
	21	48		62	1,70	0,460	450		
	22	60		74	3,30	0,160	800		
	23	60		77	3,30	0,160	800		
	24	55		71	3,15	0,200	700		
	25	57		73	3,15	0,250	600		
	26	56		74	3,15	0,285	450		
	27	62		86	3,20	0,320	450		
	30	61		87	2,90	0,330	450		
	33	61		80	2,80	0,330	490		
	36	59		76	2,80	0,380	480		
	37	57		72	2,70	0,460	470		
	39	56		84	2,60	0,430	450		
40	56	75	2,60	0,430	450				

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SMD Wire Wound Ceramic Chip Inductors

	43			52	68	2,50	0,520	450
	47			48	62	2,40	0,580	420
	51			52	59	2,30	0,700	360

Type	Inductance (nH)	Tolerance	L Freq. (MHz)	Q typ at 250(MHz)	SRF typ (GHz)	DCR (Ω) max.	IDC (mA) max.	900MHz		1.7GHz	
								L typ	Q typ	L Typ	Q Typ
0603 High Q	1,8	±5, ±10%	250	23	16,0	0,033	2100	1,77	40	1,77	65
	2,2			13	15,0	0,180	900	2,14	25	2,12	35
	3,3			32	9,60	0,024	1900	3,28	67	3,32	104
	3,6			40	9,70	0,031	1900	3,59	70	3,62	116
	3,9			35	7,50	0,039	1600	3,88	68	3,95	108
	4,3			30	7,50	0,080	1300	4,29	58	4,31	91
	4,7			26	7,90	0,100	1100	4,65	48	4,71	75
	5,1			40	8,90	0,036	1700	5,08	84	5,12	140
	5,6			48	6,60	0,036	1700	5,6	87	5,73	456
	6			49	6,00	0,036	1700	5,92	94	6,12	154
	6,8			42	5,80	0,042	1400	6,83	88	7,05	143
	7,2			48	5,40	0,052	1400	7,25	96	7,38	139
	7,5	41		5,30	0,080	1300	7,55	81	7,85	12	
	8,2	46		5,90	0,054	1400	8,21	96	8,39	148	
	8,7	46		5,50	0,054	1400	8,73	97	9,00	149	
	9,1	40		5,10	0,037	1400	9,18	76	9,64	109	
	9,5	49		4,90	0,053	1400	9,56	98	9,99	149	
	10	49		4,30	0,048	1400	10,16	90	10,64	142	
	11	41		4,10	0,058	1400	11,06	78	11,82	108	
	12	37		4,10	0,088	1100	12,26	69	13,2	91	
	15	48		3,60	0,078	1200	15,41	83	17,2	124	
	16	45		3,50	0,085	1100	16,37	77	18,7	116	
	18	41		3,30	0,066	1200	18,56	76	20,9	100	
	22	44		3,15	0,140	850	22,7	77	25,9	88	
	23	40		3,00	0,183	850	24	69	29,53	80	
	24	42		2,95	0,074	1100	24,9	77	28,9	91	
	27	44		2,80	0,150	780	28,4	74	34,0	84	
	30	49		2,80	0,130	920	31,5	82	37,9	82	
	33	45		2,70	0,170	680	34,9	76	42,9	80	
	36	44		2,50	0,225	720	38,5	69	50,0	64	
	39	48		2,45	0,19	680	41,5	78	51,9	74	
	43	45		2,45	0,17	810	45,7	83	58,1	76	
	47	47		2,30	0,24	680	50,6	77	66,9	72	
	51	49		2,30	0,28	660	54,6	73	71,3	62	
	56	50		2,20	0,30	610	60,3	74	79,9	56	
	68	46		2,00	0,33	600	75,5	73	113,3	49	
	72	46		1,90	0,42	550	80,8	69	-	-	
	75	46		1,90	0,52	500	84,6	71	-	-	
	82	45		1,80	0,46	510	94	62	-	-	
	91	45		1,65	0,58	440	103	64	-	-	
	100	49		1,70	0,54	470	114	69	-	-	
	110	47		1,60	0,58	440	126,2	63	-	-	
120	47	1,55	0,72	420	142,4	61	-	-			
150	47	1,35	0,82	390	188,8	57	-	-			
180	48	1,30	1,50	310	232,2	50	-	-			
200	47	1,25	2,00	280	265	47	-	-			
210	48	1,20	2,00	280	288	45	-	-			
220	47	1,10	2,00	280	315	41	-	-			
250	45	1,05	3,00	240	-	-	-	-			
270	46	1,05	2,25	260	-	-	-	-			

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	300			47	0,99	2,80	220	-	-	-	-
	330			46	0,93	3,60	180	-	-	-	-
	360			47	0,93	4,00	170	-	-	-	-
	390			47	0,88	4,00	170	-	-	-	-

0805 High Q	2,5	±5, ±10%	250	80 @ 1500MHz	6,00	0,020	1600		
	5,6			98 @ 1500MHz		0,035			
	6,2			88 @ 1000MHz	4,75				
	6,8			80 @ 1000MHz		4,40			
	8,2			75 @ 1000MHz	3,00			0,075	1000
	10			80 @ 1000MHz		0,060			
	12	2,80			0,045	1600			
	15	±2, ±5, ±10%		72 @ 500MHz	2,95		0,100	1200	
	16			75 @ 500MHz		2,55			0,060
	18			70 @ 500MHz	2,05		0,055	1400	
	20			80 @ 500MHz		2,00			0,100
	22			75 @ 500MHz	2,00		0,070	1300	
	27			65 @ 500MHz		1,95			0,095
	30				1,60		0,110	1100	
	39					1,40			0,095
	48				0,120		1000		
	51					200			

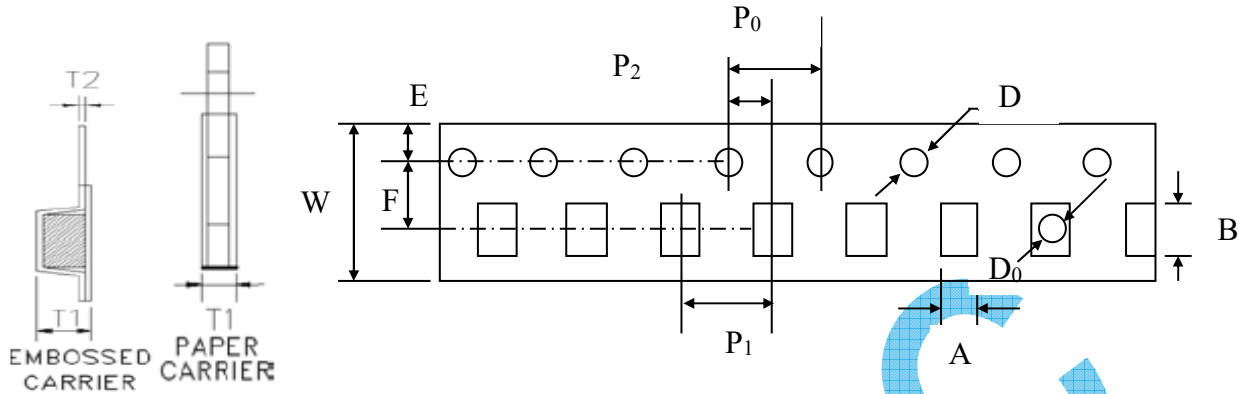
1008 High Q	3,0	±5, ±10%	50	70 @ 1500MHz	6,00	0,04	1600	
	3,9			75 @ 1500MHz		0,05		
	4,1			75 @ 500MHz	3,80			
	7,8			60 @ 500MHz		3,60		0,06
	10			70 @ 500MHz	2,80			
	12	62 @ 350MHz		2,70		0,07	1400	
	18			2,05				
	22			1,70	0,09			1300
	33	75 @ 350MHz		1,30				
	39	1,45				0,12	1200	
	47	1,23						
	56	80 @ 350MHz		1,15	0,13	1100		
	68	1,06						
	82	50 @ 350MHz		0,82	0,16	1000		
	100							

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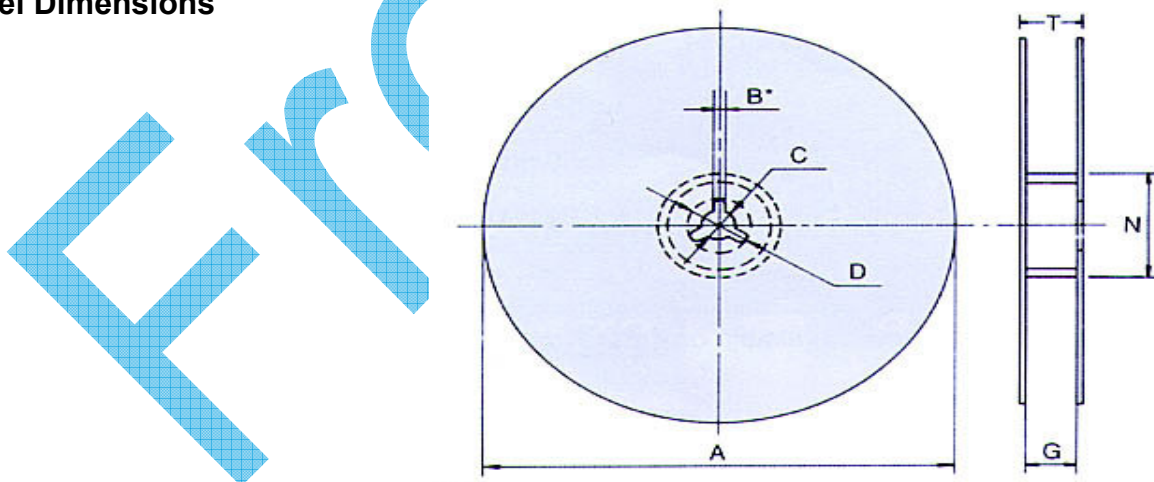
Tape Dimensions



	Type	A	B	E	F	P ₀	P ₁	P ₂	W	T ₁	D
Paper Tape	0402	0,81	1,23	1,73±0,1	3,50	4,00	2,00	2,00	8,00	0,73	1,5
	0603	1,35	1,95	1,75±0,1	3,50	4,00	4,00	2,00	8,00	0,95	1,5

	Type	A	B	E	F	P ₀	P ₁	P ₂	W	T ₁	T ₂	D	D ₀
Embossed Plastic Tape	0605	1,85±0,1	2,30±0,1	1,75±0,1	3,5±0,05	4,0±0,1	4,0±0,1	2,0±0,05	8,0±0,2	1,45±0,05	0,23±0,05	1,5	1,5
	0805 (H)	1,85±0,1	2,30±0,1	1,75±0,1	3,5±0,05	4,0±0,1	4,0±0,1	2,0±0,05	8,0±0,2	1,45±0,05	0,23±0,05	1,5	1,5
	1206	1,95±0,1	3,50±0,1	1,75±0,1	3,5±0,05	4,0±0,1	4,0±0,1	2,0±0,05	8,0±0,2	1,50±0,05	0,23±0,05	1,5	1,5
	1008	2,70±0,1	2,80±0,1	1,75±0,1	3,5±0,05	4,0±0,1	4,0±0,1	2,0±0,05	8,0±0,2	2,00±0,05	0,23±0,05	1,5	1,5
	1008 (H)	2,70±0,1	2,80±0,1	1,75±0,1	3,5±0,05	4,0±0,1	4,0±0,1	2,0±0,05	8,0±0,2	2,00±0,05	0,23±0,05	1,5	1,5

Reel Dimensions

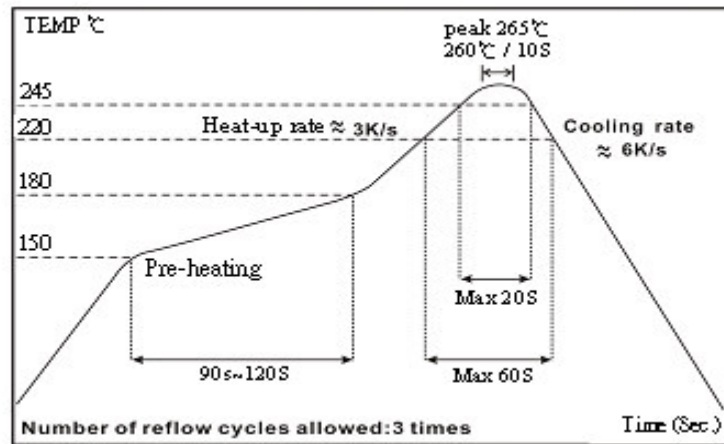


Symbol	A	N	C	D	B	G	T
Dimension	178±2,0	60,0±0,5	13,0±0,3	21,8±0,8	2,0±0,5	9,0±0,3	11,4±1,0

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Lead Free Reflow Soldering Profile



Stock period

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and a relative humidity less than 80%RH

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Electrical Performance Test

Item	Requirement	Test Method
Inductance	Refer to standard electrical characteristic spec.	HP4286/E4982A
Q		HP4286/E4982A
SRF		HP4287/E4982A
DC Resistance RDC		Micro-Ohm meter (Gom-801G)/E4982A
Rated Current IDC		Applied the current to coils, the temperature of coil increases $\Delta T 15^{\circ}\text{C}$ ($T_a=25^{\circ}\text{C}$)
Over Load	Inductors shall have no evidence of electrical and mechanical damage	Applied 2 times of rated allowed DC current to inductor for a period of 5 minutes
Withstanding Voltage	Inductors shall be no evidence of electrical and mechanical damage.	AC voltage of 500 VAC applied between inductors terminal and case for 1 min.
Insulation Resistance	1000M Ω min.	100 V _{DC} applied between inductor terminal and case

Mechanical Performance Test

Item	Requirement	Test Method
Vibration	Appearance: No damage L change: within $\pm 5\%$ Q change: within $\pm 10\%$	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1 min. Amplitude: 1,5 mm Time: 2 h for each axis (X, Y, Z), total 6 h
Resistance to Soldering Heat		Solder Temperature: $260 \pm 5^{\circ}\text{C}$ Immersion Time: 10 ± 2 seconds
Component Adhesion (Push Test)	1 lbs. For 0402 2 lbs. For 0603 3 lbs. For other	The device should be soldered (260 ± 5 for 10 seconds) to a tinned copper subs rate. A dynamiter force gauge should be applied to the side of the component. The device must with stand a minimum force of 2 or 4 pounds without a failure of adhesion on termination
Drop	No damage	Dropping chip by each side and each corner. Drop 10 times in total Drop height: 100 cm Drop weight: 125 g
Solderability	90% covered with solder	Inductor shall be dipped in a melted solder bath at $245 \pm 5^{\circ}\text{C}$ for 3 seconds
Resistance to Solvent	No damage on appearance and marking	MIL-STD202F, Method 215D

Climatic Test

Item	Requirement	Test Method															
Temperature Characteristic	Appearance: No damage L change: within $\pm 10\%$ Q change: within $\pm 20\%$	$-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$															
Humidity		Temperature: $40 \pm 2^{\circ}\text{C}$ Relative Humidity: 90~95% Time: 96 ± 2 hrs Measured after exposure in the room condition for 2 hrs															
Low Temperature Storage		Temperature: $-40 \pm 2^{\circ}\text{C}$ Time: 96 ± 2 hrs Inductors are tested after 1 hour at room temperature															
Thermal Shock		One cycle: <table border="1"> <thead> <tr> <th>Step</th> <th>Temperature [$^{\circ}\text{C}$]</th> <th>Time [min.]</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25 ± 3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25 ± 2</td> <td>15</td> </tr> <tr> <td>3</td> <td>125 ± 3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25 ± 2</td> <td>15</td> </tr> </tbody> </table> Total: 5 cycles	Step	Temperature [$^{\circ}\text{C}$]	Time [min.]	1	-25 ± 3	30	2	25 ± 2	15	3	125 ± 3	30	4	25 ± 2	15
Step		Temperature [$^{\circ}\text{C}$]	Time [min.]														
1		-25 ± 3	30														
2		25 ± 2	15														
3	125 ± 3	30															
4	25 ± 2	15															
High Temperature Storage	Temperature: $125 \pm 2^{\circ}\text{C}$ Time: 96 ± 2 hrs Measured after exposure in the room condition for 1hour																
High Temperature Load Life	There should be no evidence of short of open circuit.	Temperature: $85 \pm 2^{\circ}\text{C}$ Time: 1000 ± 12 h Load: Allowed DC current															
Damp Heat with Load		Temperature: $40 \pm 2^{\circ}\text{C}$ Relative Humidity: 90~95% Time: 1000 ± 12 h Load: Allowed DC current															

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