

FEATURES:

- Photolithographic single layer ceramic chip technology
- High SRF with good Q and superior temperature stability
- Self resonant frequency controlled within 10%
- Stable inductance in high frequency applications
- Operating Temperature Range: -40°C to +85°C
- Inductance Range: 0.7nH to 33nH



PART NUMBER STRUCTURE

TFI	0201	Q	-	3N9	B	T
Series	Size	Series Type		Inductance Value	Tolerance	Packaging
	0201 0402	S = Standard Q = Hi Q		0N1 = 0.1nH 3N9 = 3.9nH 270 = 27nH	B = ±0.1nH C = ±0.2nH S = ±0.3nH F = ±1% G = ±2% H = ±3% J = ±5%	T = 7" Reel

Example P/N: TFI0201Q-3N9BT

Standard Termination is 100% matte Tin over Nickel.

DIMENSIONS

Unit: inches (mm)

SIZE (inches)	L	W	T	C
0201 (0603)	0.024 ±0.002 (0.60 ±0.05)	0.0118 ±0.002 (0.30 ±0.05)	0.009 ±0.002 (0.23 ±0.05)	0.006 ±0.002 (0.15 ±0.05)
0402 (1005)	0.040 ±0.002 (1.0 ±0.05)	0.020 ±0.002 (0.50 ±0.05)	0.013 ±0.002 (0.32 ±0.05)	0.008 ±0.004 (0.20 ±0.10)

STRUCTURE

1	Alumina Substrate	5	Copper Coil
2	Inner Electrode (Ni-Cr)	6	Overcoat
3	Barrier Layer (Ni)	7	TFI Series Identifier
4	External Electrode (Sn)		

ELECTRICAL SPECIFICATION & RANGE

SIZE: 0201 (STANDARD)

INDUCTANCE (nH)	INDUCTANCE TOLERANCE	Q @ 500 MHz	SERIES RESONANCE FREQUENCY (GHz)	DC RESISTANCE (Ω)	MAX CURRENT RATING (mA)	PART NUMBER
0.7nH	±0.1nH, ±0.2nH	8	9	0.2	400	TFI0201S-0N7□T
0.8nH	±0.1nH, ±0.2nH	8	9	0.2	400	TFI0201S-0N8□T
0.9nH	±0.1nH, ±0.2nH	8	9	0.2	400	TFI0201S-0N9□T
1.0nH	±0.1nH, ±0.2nH	8	9	0.25	350	TFI0201S-1N0□T
1.1nH	±0.1nH, ±0.2nH	8	9	0.25	350	TFI0201S-1N1□T
1.2nH	±0.1nH, ±0.2nH	8	9	0.25	350	TFI0201S-1N2□T
1.3nH	±0.1nH, ±0.2nH	8	9	0.3	300	TFI0201S-1N3□T
1.4nH	±0.1nH, ±0.2nH	8	9	0.3	300	TFI0201S-1N4□T
1.5nH	±0.1nH, ±0.2nH	8	9	0.3	300	TFI0201S-1N5□T
1.6nH	±0.1nH, ±0.2nH	8	9	0.3	300	TFI0201S-1N6□T
1.7nH	±0.1nH, ±0.2nH	8	9	0.35	300	TFI0201S-1N7□T
1.8nH	±0.1nH, ±0.2nH	8	9	0.35	300	TFI0201S-1N8□T
1.9nH	±0.1nH, ±0.2nH	8	9	0.45	250	TFI0201S-1N9□T
2.0nH	±0.1nH, ±0.2nH	8	9	0.45	250	TFI0201S-2N0□T
2.1nH	±0.1nH, ±0.2nH	8	9	0.45	250	TFI0201S-2N1□T
2.2nH	±0.1nH, ±0.2nH	8	9	0.55	200	TFI0201S-2N2□T
2.3nH	±0.1nH, ±0.2nH	8	9	0.55	200	TFI0201S-2N3□T
2.4nH	±0.1nH, ±0.2nH	8	9	0.55	200	TFI0201S-2N4□T
2.5nH	±0.1nH, ±0.2nH	8	9	0.55	200	TFI0201S-2N5□T
2.6nH	±0.1nH, ±0.2nH	8	8	0.7	200	TFI0201S-2N6□T
2.7nH	±0.1nH, ±0.2nH	8	8	0.7	200	TFI0201S-2N7□T
2.8nH	±0.1nH, ±0.2nH	8	8	0.7	200	TFI0201S-2N8□T
2.9nH	±0.1nH, ±0.2nH	8	8	0.8	150	TFI0201S-2N9□T
3.0nH	±0.1nH, ±0.2nH	8	8	0.8	150	TFI0201S-3N0□T
3.1nH	±0.1nH, ±0.2nH	8	8	0.8	150	TFI0201S-3N1□T
3.2nH	±0.1nH, ±0.2nH	8	8	0.8	150	TFI0201S-3N2□T
3.3nH	±0.1nH, ±0.2nH	8	8	0.8	150	TFI0201S-3N3□T
3.4nH	±0.1nH, ±0.2nH	8	6	1	150	TFI0201S-3N4□T
3.5nH	±0.1nH, ±0.2nH	8	6	1	150	TFI0201S-3N5□T
3.6nH	±0.1nH, ±0.2nH	8	6	1	150	TFI0201S-3N6□T
3.7nH	±0.1nH, ±0.2nH	8	6	1	150	TFI0201S-3N7□T
3.8nH	±0.1nH, ±0.2nH	8	6	1	150	TFI0201S-3N8□T
3.9nH	±0.1nH, ±0.2nH	8	6	1	150	TFI0201S-3N9□T
4.0nH	±0.1nH, ±0.2nH	8	6	1.2	150	TFI0201S-4N0□T
4.1nH	±0.1nH, ±0.2nH	8	6	1.2	150	TFI0201S-4N1□T
4.2nH	±0.1nH, ±0.2nH	8	6	1.2	150	TFI0201S-4N2□T
4.3nH	±3%, ±5%	8	6	1.2	150	TFI0201S-4N3□T
4.7nH	±3%, ±5%	8	6	1.2	150	TFI0201S-4N7□T
5.1nH	±3%, ±5%	8	6	1.3	140	TFI0201S-5N1□T
5.6nH	±3%, ±5%	8	6	1.6	130	TFI0201S-5N6□T
6.2nH	±3%, ±5%	8	4	1.8	130	TFI0201S-6N2□T
6.8nH	±3%, ±5%	8	4	2	120	TFI0201S-6N8□T
7.5nH	±3%, ±5%	8	4	2.3	110	TFI0201S-7N5□T
8.2nH	±3%, ±5%	8	4	2.8	110	TFI0201S-8N2□T
9.1nH	±3%, ±5%	8	3	3	110	TFI0201S-9N1□T
10.0nH	±3%, ±5%	8	3	3.25	100	TFI0201S-10N□T
10.8nH	±3%, ±5%	8	2	3.5	80	TFI0201S-10N8□T

ELECTRICAL SPECIFICATION & RANGE

SIZE: 0201 (Hi-Q)

INDUCTANCE (nH)	INDUCTANCE TOLERANCE	Q @ 500 MHz	SERIES RESONANCE FREQUENCY (GHz)	DC RESISTANCE (Ω)	MAX CURRENT RATING (mA)	PART NUMBER
0.7nH	±0.1nH, ±0.2nH	14	6.00	0.05	850	TFI0201Q-0N7□T
0.8nH	±0.1nH, ±0.2nH	14	6.00	0.05	800	TFI0201Q-0N8□T
0.9nH	±0.1nH, ±0.2nH	14	6.00	0.05	800	TFI0201Q-0N9□T
1.0nH	±0.1nH, ±0.2nH	14	6.00	0.05	750	TFI0201Q-1N0□T
1.1nH	±0.1nH, ±0.2nH	14	6.00	0.1	750	TFI0201Q-1N1□T
1.2nH	±0.1nH, ±0.2nH	14	6.00	0.1	750	TFI0201Q-1N2□T
1.3nH	±0.1nH, ±0.2nH	14	6.00	0.1	600	TFI0201Q-1N3□T
1.4nH	±0.1nH, ±0.2nH	14	6.00	0.1	600	TFI0201Q-1N4□T
1.5nH	±0.1nH, ±0.2nH	14	6.00	0.1	600	TFI0201Q-1N5□T
1.6nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-1N6□T
1.7nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-1N7□T
1.8nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-1N8□T
1.9nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-1N9□T
2.0nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-2N0□T
2.1nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-2N1□T
2.2nH	±0.1nH, ±0.2nH	14	6.00	0.15	600	TFI0201Q-2N2□T
2.3nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N3□T
2.4nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N4□T
2.5nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N5□T
2.6nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N6□T
2.7nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N7□T
2.8nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N8□T
2.9nH	±0.1nH, ±0.2nH	14	6.00	0.2	500	TFI0201Q-2N9□T
3.0nH	±0.1nH, ±0.2nH	14	6.00	0.25	450	TFI0201Q-3N0□T
3.1nH	±0.1nH, ±0.2nH	14	6.00	0.25	450	TFI0201Q-3N1□T
3.2nH	±0.1nH, ±0.2nH	14	6.00	0.25	450	TFI0201Q-3N2□T
3.3nH	±0.1nH, ±0.2nH	14	6.00	0.25	450	TFI0201Q-3N3□T
3.4nH	±0.1nH, ±0.2nH	14	6.00	0.25	450	TFI0201Q-3N4□T
3.5nH	±0.1nH, ±0.2nH	14	6.00	0.25	450	TFI0201Q-3N5□T
3.6nH	±0.1nH, ±0.2nH	14	6.00	0.3	400	TFI0201Q-3N6□T
3.7nH	±0.1nH, ±0.2nH	14	6.00	0.3	400	TFI0201Q-3N7□T
3.8nH	±0.1nH, ±0.2nH	14	6.00	0.3	400	TFI0201Q-3N8□T
3.9nH	±0.1nH, ±0.2nH	14	6.00	0.3	400	TFI0201Q-3N9□T
4.0nH	±0.1nH, ±0.2nH	14	6.00	0.4	350	TFI0201Q-4N0□T
4.1nH	±0.1nH, ±0.2nH	14	6.00	0.4	350	TFI0201Q-4N1□T
4.2nH	±0.1nH, ±0.2nH	14	6.00	0.4	350	TFI0201Q-4N2□T
4.3nH	±3%, ±5%	14	6.00	0.4	350	TFI0201Q-4N3□T
4.7nH	±3%, ±5%	14	6.00	0.4	350	TFI0201Q-4N7□T
5.1nH	±3%, ±5%	14	6.50	0.5	300	TFI0201Q-5N1□T
5.6nH	±3%, ±5%	14	6.00	0.6	300	TFI0201Q-5N6□T
6.2nH	±3%, ±5%	14	6.00	0.6	250	TFI0201Q-6N2□T
6.8nH	±3%, ±5%	14	5.50	0.7	250	TFI0201Q-6N8□T
7.5nH	±3%, ±5%	14	5.00	0.75	250	TFI0201Q-7N5□T
8.2nH	±3%, ±5%	14	5.00	0.8	200	TFI0201Q-8N2□T
9.1nH	±3%, ±5%	14	4.50	0.9	200	TFI0201Q-9N1□T
10.0nH	±3%, ±5%	14	4.00	1.15	150	TFI0201Q-10N□T
10.8nH	±3%, ±5%	14	3.50	1.3	150	TFI0201Q-10N8□T

ELECTRICAL SPECIFICATION & RANGE

SIZE: 0402 (STANDARD)

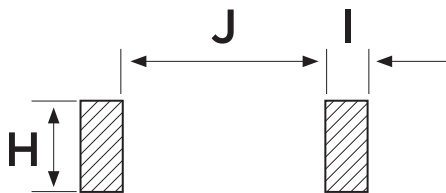
INDUCTANCE (nH)	INDUCTANCE TOLERANCE	Q @ 500 MHz	SERIES RESONANCE FREQUENCY (GHz)	DC RESISTANCE (Ω)	MAX CURRENT RATING (mA)	PART NUMBER
1.0nH	±0.1nH, ±0.2nH, ±0.3nH	13	14	0.1	800	TFI0402S-1N0□T
1.1nH	±0.1nH, ±0.2nH, ±0.3nH	13	14	0.1	800	TFI0402S-1N1□T
1.2nH	±0.1nH, ±0.2nH, ±0.3nH	13	14	0.1	800	TFI0402S-1N2□T
1.3nH	±0.1nH, ±0.2nH, ±0.3nH	13	14	0.15	700	TFI0402S-1N3□T
1.5nH	±0.1nH, ±0.2nH, ±0.3nH	13	14	0.15	700	TFI0402S-1N5□T
1.6nH	±0.1nH, ±0.2nH, ±0.3nH	13	14	0.15	700	TFI0402S-1N6□T
1.7nH	±0.1nH, ±0.2nH, ±0.3nH	13	12	0.15	700	TFI0402S-1N7□T
1.8nH	±0.1nH, ±0.2nH, ±0.3nH	13	12	0.15	700	TFI0402S-1N□T
2.0nH	±0.1nH, ±0.2nH, ±0.3nH	13	10	0.25	700	TFI0402S-2N0□T
2.2nH	±0.1nH, ±0.2nH, ±0.3nH	13	10	0.25	700	TFI0402S-2N2□T
2.3nH	±0.1nH, ±0.2nH, ±0.3nH	13	10	0.25	560	TFI0402S-2N3□T
2.4nH	±0.1nH, ±0.2nH, ±0.3nH	13	10	0.25	560	TFI0402S-2N4□T
2.7nH	±0.1nH, ±0.2nH, ±0.3nH	13	10	0.25	560	TFI0402S-2N7□T
2.9nH	±0.1nH, ±0.2nH, ±0.3nH	13	8	0.35	560	TFI0402S-2N9□T
3.0nH	±0.1nH, ±0.2nH, ±0.3nH	13	8	0.35	440	TFI0402S-3N0□T
3.1nH	±0.1nH, ±0.2nH, ±0.3nH	13	8	0.35	440	TFI0402S-3N1□T
3.2nH	±0.1nH, ±0.2nH, ±0.3nH	13	8	0.35	440	TFI0402S-3N2□T
3.3nH	±0.1nH, ±0.2nH, ±0.3nH	13	8	0.35	440	TFI0402S-3N3□T
3.6nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.45	380	TFI0402S-3N6□T
3.7nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.45	380	TFI0402S-3N7□T
3.9nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.45	380	TFI0402S-3N9□T
4.1nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.45	380	TFI0402S-4N1□T
4.3nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.55	380	TFI0402S-4N3□T
4.5nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.55	340	TFI0402S-4N5□T
4.7nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.55	340	TFI0402S-4N7□T
5.1nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.65	320	TFI0402S-5N1□T
5.6nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.65	320	TFI0402S-5N6□T
6.2nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.85	280	TFI0402S-6N2□T
6.5nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.85	280	TFI0402S-6N5□T
6.8nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	0.85	280	TFI0402S-6N8□T
7.5nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	1.05	260	TFI0402S-7N5□T
7.7nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	1.05	260	TFI0402S-7N7□T
8.2nH	±0.1nH, ±0.2nH, ±0.3nH	13	6	1.05	260	TFI0402S-8N2□T
9.1nH	±0.1nH, ±0.2nH, ±0.3nH	13	5.5	1.25	220	TFI0402S-9N1□T
9.2nH	±0.1nH, ±0.2nH, ±0.3nH	13	5.5	1.25	220	TFI0402S-9N2□T
10nH	±0.1nH, ±0.2nH, ±0.3nH	13	5.5	1.25	220	TFI0402S-10N□T
12nH	±1%, ±2%, ±3%, ±5%	13	4.5	1.35	200	TFI0402S-12N□T
15nH	±1%, ±2%, ±3%, ±5%	13	3.7	1.75	180	TFI0402S-15N□T
18nH	±1%, ±2%, ±3%, ±5%	13	3.1	1.95	100	TFI0402S-18N□T
22nH	±1%, ±2%, ±3%, ±5%	13	2.8	2.55	90	TFI0402S-22N□T
27nH	±1%, ±2%, ±3%, ±5%	13	2.5	3.25	75	TFI0402S-27N□T
33nH	±1%, ±2%, ±3%, ±5%	13	2.5	4.50	75	TFI0402S-33N□T

ELECTRICAL SPECIFICATION & RANGE

SIZE: 0402 (Hi-Q)

INDUCTANCE (nH)	INDUCTANCE TOLERANCE	Q @ 500 MHz	SERIES RESONANCE FREQUENCY (GHz)	DC RESISTANCE (Ω)	MAX CURRENT RATING (mA)	PART NUMBER
1.0nH	±0.1nH, ±0.2nH, ±0.3nH	16	14	0.1	1000	TFI0402Q-1N0□T
1.1nH	±0.1nH, ±0.2nH, ±0.3nH	16	14	0.1	1000	TFI0402Q-1N1□T
1.2nH	±0.1nH, ±0.2nH, ±0.3nH	16	14	0.1	1000	TFI0402Q-1N2□T
1.3nH	±0.1nH, ±0.2nH, ±0.3nH	16	14	0.12	850	TFI0402Q-1N3□T
1.5nH	±0.1nH, ±0.2nH, ±0.3nH	16	14	0.12	850	TFI0402Q-1N5□T
1.6nH	±0.1nH, ±0.2nH, ±0.3nH	16	14	0.12	850	TFI0402Q-1N6□T
1.7nH	±0.1nH, ±0.2nH, ±0.3nH	16	12	0.12	850	TFI0402Q-1N7□T
1.8nH	±0.1nH, ±0.2nH, ±0.3nH	16	12	0.12	850	TFI0402Q-1N8□T
2.0nH	±0.1nH, ±0.2nH, ±0.3nH	16	10	0.2	850	TFI0402Q-2N0□T
2.2nH	±0.1nH, ±0.2nH, ±0.3nH	16	10	0.2	850	TFI0402Q-2N2□T
2.3nH	±0.1nH, ±0.2nH, ±0.3nH	16	10	0.2	675	TFI0402Q-2N3□T
2.4nH	±0.1nH, ±0.2nH, ±0.3nH	16	10	0.2	675	TFI0402Q-2N4□T
2.7nH	±0.1nH, ±0.2nH, ±0.3nH	16	10	0.2	675	TFI0402Q-2N7□T
2.9nH	±0.1nH, ±0.2nH, ±0.3nH	16	8	0.28	675	TFI0402Q-2N9□T
3.0nH	±0.1nH, ±0.2nH, ±0.3nH	16	8	0.28	530	TFI0402Q-3N0□T
3.1nH	±0.1nH, ±0.2nH, ±0.3nH	16	8	0.28	530	TFI0402Q-3N1□T
3.2nH	±0.1nH, ±0.2nH, ±0.3nH	16	8	0.28	530	TFI0402Q-3N2□T
3.3nH	±0.1nH, ±0.2nH, ±0.3nH	16	8	0.28	530	TFI0402Q-3N3□T
3.6nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.35	460	TFI0402Q-3N6□T
3.7nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.35	460	TFI0402Q-3N7□T
3.9nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.35	460	TFI0402Q-3N9□T
4.1nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.35	460	TFI0402Q-4N1□T
4.3nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.45	460	TFI0402Q-4N3□T
4.5nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.45	410	TFI0402Q-4N5□T
4.7nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.45	410	TFI0402Q-4N7□T
5.1nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.55	350	TFI0402Q-5N1□T
5.6nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.55	350	TFI0402Q-5N6□T
6.2nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.7	310	TFI0402Q-6N2□T
6.5nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.7	310	TFI0402Q-6N5□T
6.8nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.7	310	TFI0402Q-6N8□T
7.5nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.9	290	TFI0402Q-7N5□T
7.7nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.9	290	TFI0402Q-7N7□T
8.2nH	±0.1nH, ±0.2nH, ±0.3nH	16	6	0.9	290	TFI0402Q-8N2□T
9.1nH	±0.1nH, ±0.2nH, ±0.3nH	16	5.5	1.0	245	TFI0402Q-9N1□T
9.2nH	±0.1nH, ±0.2nH, ±0.3nH	16	5.5	1.0	245	TFI0402Q-9N2□T
10nH	±0.1nH, ±0.2nH, ±0.3nH	16	5.5	1.0	245	TFI0402Q-10N□T

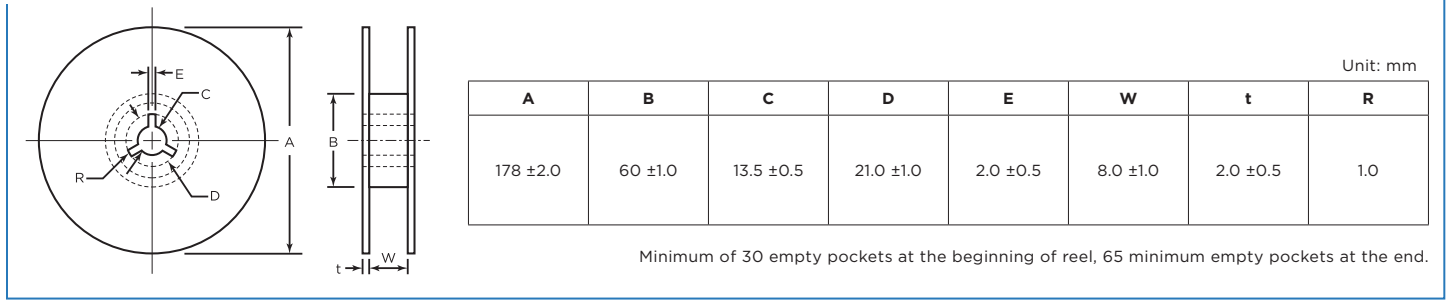
RECOMMENDED LAND PATTERN



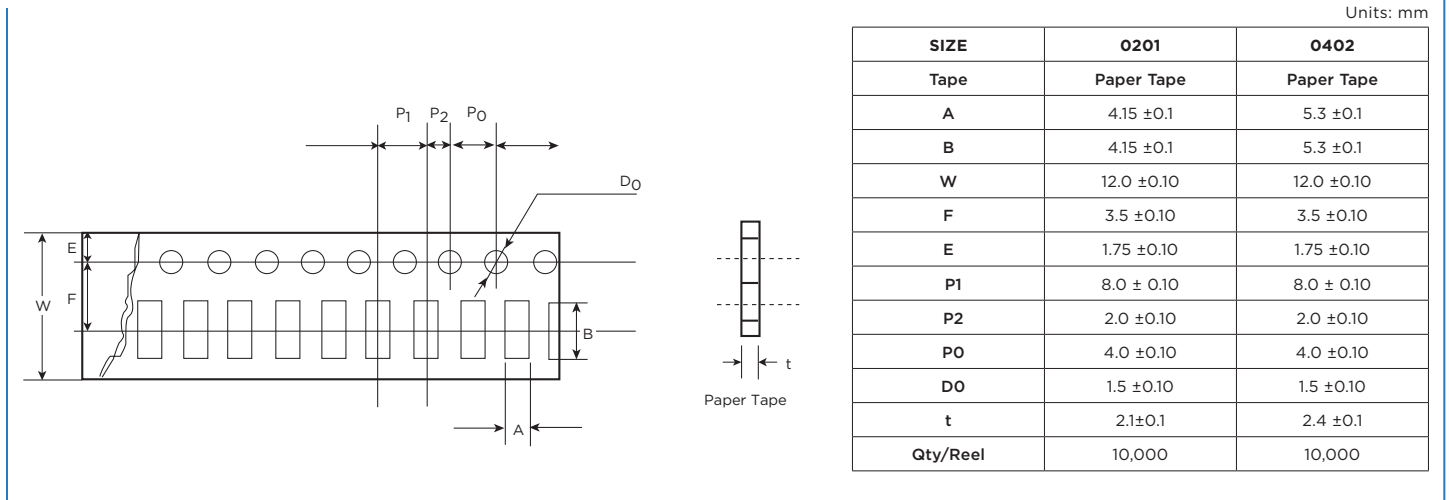
Unit: mm

SIZE	H	I	J
0201	0.30 ±0.20	0.25	0.30 ±0.10
0402	0.60 ±0.20	0.45	0.50 ±0.10

REEL SPECIFICATIONS



TAPE SPECIFICATIONS



ENVIRONMENTAL CHARACTERISTICS

TEST	REQUIREMENT	TEST METHOD
Inductance	As Spec.	Measuring equipment and fixture: 0201: HP4287+Agilent 16196C 0402: HP4287+Agilent 16196B
Insulation Resistance	>1000MΩ	MIL-STD-202 Method 302 Apply 100VDC for 1minute
Damp Heat with Load	ΔL≤10%	MIL-STD-202 Method 103B 40±2°C, 90-95% R.H. Max. working voltage for 1000 hrs with 1.5 hrs "ON" and 0.5 hrs "OFF"
Bending Strength	As Spec.	JIS-C-5201-1 4.33 Bending Amplitude 3mm for 10 seconds
Solderability	95% min. coverage	MIL-STD-202 Method 208H 245±5°C for 3 seconds
Resistance to Soldering Heat	ΔL≤10%	MIL-STD-202 Method 210E 260±5°C for 10 seconds
Dielectric Withstand Voltage	>100V	MIL-STD-202 Method 301 Apply 100VA (rms) for 1minute
High Temperature Exposure	ΔL≤10%	JIS-C-5201-1 7.2 85±2°C, 1000 +48/-0 hours
Low Temperature Storage	ΔL≤10%	JIS-C-5201-1 7.1 -40±3°C, 1000 +48/-0 hours
Temperature Cycle	ΔL≤10%	JIS-C-5201-1 7.4 -40/RT/85/RT, 10 cycles