

Type TFC322522 (0.01 ~ 220) μ H

- # Standard EIA 1210 package
- # Reflow or wave soldering
- # High S.R.F.
- # Ceramic core
- # High Q

The type TFC322522 chip inductors in the standard EIA 1210 package are high quality products exhibiting excellent mechanical and electrical characteristics. Supplied on 8mm tape and reel or bulk packed, they are particularly suitable for high frequency applications in miniature equipment.

Electrodes are triple plated with silver, nickel and lead metal combinations to achieve ideal solderability using reflow or solder bath techniques, case material is ceramic and the inductance coil is wound using polyurethane enamelled copper wire.

Electrical specification

Case style	TFC322522 type 1210 subminiature ceramic chip
Inductance range	(0.01 ~ 220) μ H
Temperature coefficient	(-1000 +2000)ppm/ $^{\circ}$ C
Marking	Epoxy ink, four figure code on top of body
Working temp. range	(-25 +85) $^{\circ}$ C
Storage temp. range	(-40 +85) $^{\circ}$ C
Current overload	1.5 times rated current 5 minutes max.
Insulation resistance	1000 Meg. Ω min., 100V d.c. applied between coil terminal and ceramic case, one minute max.
Dielectric strength	250V a.c. applied between coil terminal and case, one minute max.

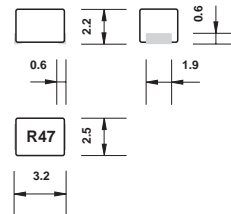
Environmental specification

Dry heat	μ H \pm 5% max., Q \pm 30% max., +85 $^{\circ}$ C for 1000 hours
Cold	μ H \pm 5% max., Q \pm 30% max., -40 $^{\circ}$ C for 1000 hours
Damp heat	μ H \pm 5% max., Q \pm 30% max., relative humidity 90% ~ 95%, +60 $^{\circ}$ C for 1000 hours
Resistance to solvents	Resistant to fluorocarbon based 'freon' etc., trichloroethane or isopropyl alcohol

Mechanical specification

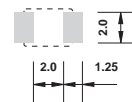
Vibration	μ H \pm 5% max., Q \pm 25% max., frequency sweep (10 ~ 55)Hz in one minute, amplitude 1.5mm, each of three mutually perpendicular planes, two hours each plane
Shock	μ H \pm 5% max., Q \pm 25% max., 100G, 6 milli. sec., half sine wave each of three mutually perpendicular planes, three shocks each plane
Solderability	95% uniform coating min. with pre-coating of flux, heating to +130 $^{\circ}$ C to +150 $^{\circ}$ C and dip into solder at +230 $^{\circ}$ C for 3 secs.
Solder heat resistance	μ H \pm 3% max., Q \pm 25% max., 4 secs. +300 $^{\circ}$ C applied to electrode for 4 secs. max.

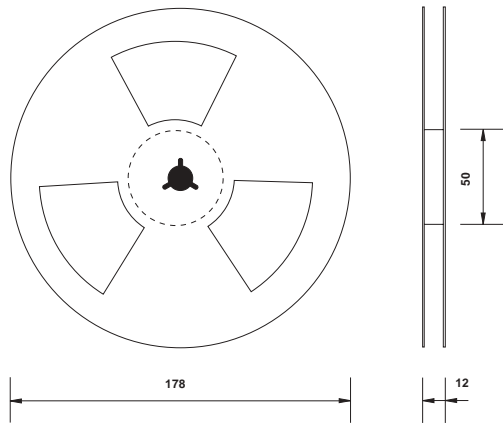
Dimensions(mm) shown x3



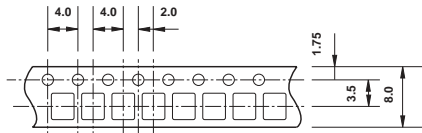
Pad dimensions: 1.9mm x 0.6mm
Suitable for reflow or wave soldering
Case material: Plastic 34V-0

Suggested land pattern: pad size 2.0 x 1.25



TFC322522 tape and reel dimensions(mm)


Centre hole diameter 13.0mm, slot width 2mm spaced at 120°
 Reel quantity 2000 pieces, leader tape 400mm minimum
 Trailer tape: 10 empty compartments minimum



Tape transport hole diameter 1.5mm
 Compartment size 2.8mm x 3.6mm, depth 2.3mm

Standard values

TFC Part No.	μH $\pm 10\%$	Q min.	Test Freq. MHz	S.R.F. min. MHz	Ω d.c. max.	I d.c. max. mA
TFC322522 - R010M	0.010	15	100	2500	0.13	450
TFC322522 - R015M	0.015	19	100	2100	0.16	450
TFC322522 - R022M	0.022	23	100	1900	0.20	450
TFC322522 - R033M	0.033	25	100	1400	0.24	450
TFC322522 - R047M	0.047	26	100	1200	0.30	450
TFC322522 - R068M	0.068	27	100	1000	0.36	450
TFC322522 - R10M	0.10	28	100	700	0.44	450
TFC322522 - R12M	0.12	30	25.2	500	0.22	450
TFC322522 - R15M	0.15	30	25.2	450	0.25	450
TFC322522 - R18M	0.18	30	25.2	400	0.28	450
TFC322522 - R22M	0.22	30	25.2	350	0.32	450
TFC322522 - R27M	0.27	30	25.2	320	0.36	450
TFC322522 - R33M	0.33	30	25.2	300	0.40	450
TFC322522 - R39M	0.39	30	25.2	250	0.45	450
TFC322522 - R47M	0.47	30	25.2	220	0.50	450
TFC322522 - R56M	0.56	30	25.2	180	0.55	450
TFC322522 - R68M	0.68	30	25.2	160	0.60	450
TFC322522 - R82M	0.82	30	25.2	140	0.65	450
TFC322522 - 1R0K	1.0	30	7.96	120	0.70	400
TFC322522 - 1R2K	1.2	30	7.96	100	0.75	390
TFC322522 - 1R5K	1.5	30	7.96	85	0.85	370
TFC322522 - 1R8K	1.8	30	7.96	80	0.90	350
TFC322522 - 2R2K	2.2	30	7.96	75	1.00	320
TFC322522 - 2R7K	2.7	30	7.96	70	1.10	290
TFC322522 - 3R3K	3.3	30	7.96	60	1.20	260
TFC322522 - 3R9K	3.9	30	7.96	55	1.30	250
TFC322522 - 4R7K	4.7	30	7.96	50	1.50	220
TFC322522 - 5R6K	5.6	30	7.96	45	1.60	200
TFC322522 - 6R8K	6.8	30	7.96	40	1.80	180
TFC322522 - 8R2K	8.2	30	7.96	35	2.00	170
TFC322522 - 100K	10	30	2.52	30	2.10	150
TFC322522 - 120K	12	30	2.52	20	2.50	140
TFC322522 - 150K	15	30	2.52	20	2.80	130
TFC322522 - 180K	18	30	2.52	20	3.30	120
TFC322522 - 220K	22	30	2.52	20	3.70	110
TFC322522 - 270K	27	30	2.52	20	5.00	80
TFC322522 - 330K	33	30	2.52	17	5.60	70
TFC322522 - 390K	39	30	2.52	16	6.40	65
TFC322522 - 470K	47	30	2.52	15	7.00	60
TFC322522 - 560K	56	30	2.52	13	8.00	55
TFC322522 - 680K	68	30	2.52	12	9.00	50
TFC322522 - 820K	82	30	2.52	11	10	45
TFC322522 - 101K	100	20	0.796	10	10	40
TFC322522 - 121K	120	20	0.796	10	11	70
TFC322522 - 151K	150	20	0.796	8	15	65
TFC322522 - 181K	180	20	0.796	7	17	60
TFC322522 - 221K	220	20	0.796	7	21	50

Ordering information

Order the type TFC322522 chip inductors using the following standard part numbers to indicate value, tolerance and packaging:

TFC Part No ----- TFC322522 101 K T

TFC322522 ----- Type No.

101 ----- Inductance value code

K ----- Tolerance:

----- M = 20%, K = 10%, J = 5%

----- 5% available 10 μH to 220 μH

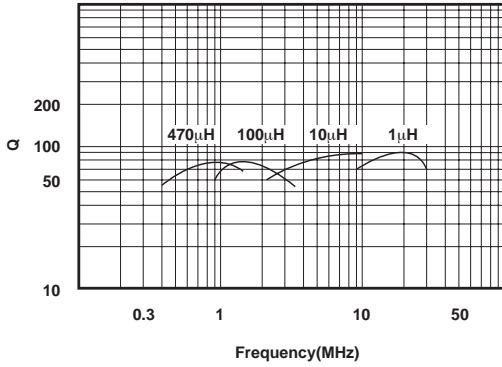
T ----- Packing method:

----- T = embossed tape and reel

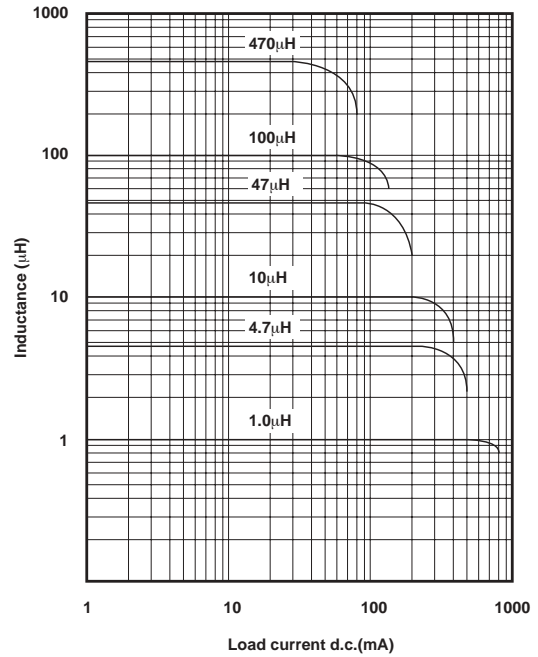
Inductance characteristics

The following characteristics show typical variations in inductance value against temperature and d.c. load current and the variation of Q against frequency for the TFC322522 range of standard chip inductors.

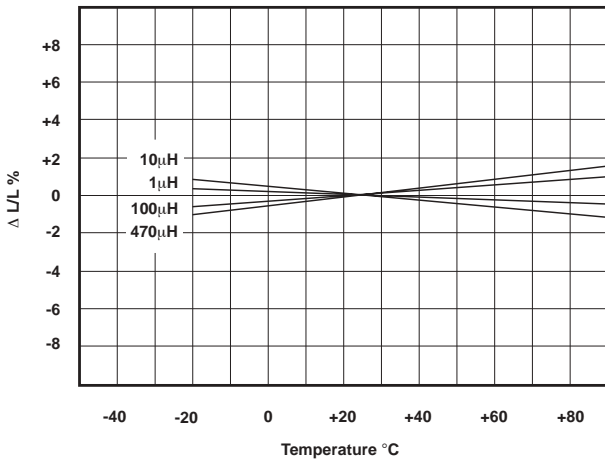
Q against frequency



Inductance against d.c. load current



Inductance against temperature



Test circuit

