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TDK Corporation
TFSQ0402C0H1C0R2WT

For any questions, you can email us directly:
sales@integrated-circuit.com

Thin Film Capacitors(Z-match)

For Impedance Matching at High Frequency

TFSQ Series

Type: **TFSQ0402 (0.4×0.2×0.2mm)**

Issue date: August 2011

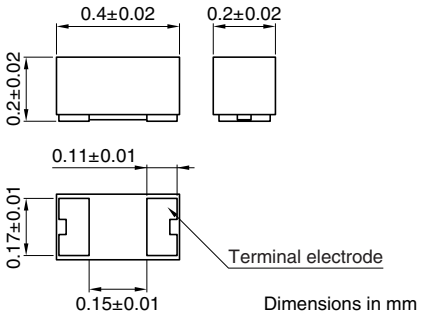
- All specifications are subject to change without notice.
- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

TDK

Thin Film Capacitors(Z-match)
TFSQ0402 Series

Conformity to RoHS Directive

SHAPES AND DIMENSIONS



PRODUCT IDENTIFICATION

TFSQ0402	C0H	1C	3R0	W	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Capacitance temperature characteristics

Class 1 (Temperature compensation)

Temperature characteristics	Capacitance change	Temperature range
C0H	0±60ppm/°C	–55 to +125°C

(3) Rated voltage Edc

1C	16V

(4) Nominal capacitance

The capacitance is expressed in three digit codes and in units of pico farads (pF).

The first and second digits identify the first and second significant figures of the capacitance.

The third digit identifies the multiplier.

R designates a decimal point.

0R2	0.2pF
3R0	3.0pF

(5) Capacitance tolerance

Symbol	Tolerance
W	±0.05pF
B	±0.1pF

(6) Packaging style

T	Taping (reel)

- This specification is applicable to thin film capacitors with a priority over the other relevant specifications. Production places defined in this specification should be TDK-EPC Corporation Japan.
- This specification warrants the quality of the thin film capacitors. The chips should be evaluated or confirmed a state of mounted on your product. If the use of the chips goes beyond the bounds of the specification, we can not afford to guarantee.

- Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

CAPACITANCE RANGES: CLASS 1 (TEMPERATURE COMPENSATION)

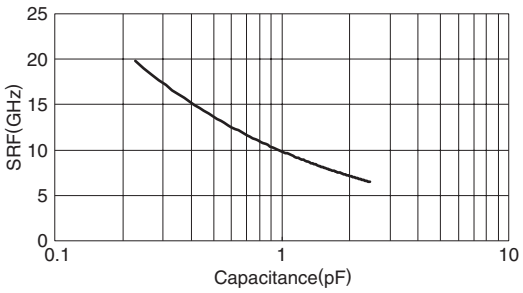
TEMPERATURE CHARACTERISTICS: C0H(0±60ppm/°C)

RATED VOLTAGE Edc: 16V

Capacitance (pF)	Tolerance (pF)	Q typ. [at 2GHz]	SRF (GHz)typ.	Part No. Temperature characteristics:C0H
0.2	±0.05	296	21.0	TFSQ0402C0H1C0R2WT
0.3	±0.05	350	17.4	TFSQ0402C0H1C0R3WT
0.4	±0.05	428	15.2	TFSQ0402C0H1C0R4WT
0.5	±0.05	390	13.7	TFSQ0402C0H1C0R5WT
0.6	±0.05	429	12.5	TFSQ0402C0H1C0R6WT
0.7	±0.05	429	11.7	TFSQ0402C0H1C0R7WT
0.8	±0.05	453	11.0	TFSQ0402C0H1C0R8WT
0.9	±0.05	430	10.4	TFSQ0402C0H1C0R9WT
1.0	±0.05	356	9.9	TFSQ0402C0H1C1R0WT
1.1	±0.05	356	9.4	TFSQ0402C0H1C1R1WT
1.2	±0.05	357	9.1	TFSQ0402C0H1C1R2WT
1.3	±0.05	339	8.7	TFSQ0402C0H1C1R3WT
1.4	±0.05	336	8.4	TFSQ0402C0H1C1R4WT
1.5	±0.05	321	8.2	TFSQ0402C0H1C1R5WT
1.6	±0.05	311	7.9	TFSQ0402C0H1C1R6WT
1.7	±0.05	312	7.7	TFSQ0402C0H1C1R7WT
1.8	±0.05	307	7.5	TFSQ0402C0H1C1R8WT
1.9	±0.05	292	7.3	TFSQ0402C0H1C1R9WT
2.0	±0.05	293	7.1	TFSQ0402C0H1C2R0WT
2.1	±0.05	280	7.0	TFSQ0402C0H1C2R1WT
2.2	±0.05	273	6.8	TFSQ0402C0H1C2R2WT
2.3	±0.05	261	6.7	TFSQ0402C0H1C2R3WT
2.4	±0.05	244	6.5	TFSQ0402C0H1C2R4WT
2.5	±0.05	246	6.4	TFSQ0402C0H1C2R5WT
2.6	±0.05	240	6.3	TFSQ0402C0H1C2R6WT
2.7	±0.05	215	6.2	TFSQ0402C0H1C2R7WT
2.8	±0.05	224	6.1	TFSQ0402C0H1C2R8WT
2.9	±0.05	219	6.0	TFSQ0402C0H1C2R9WT
3.0	±0.05	194	5.9	TFSQ0402C0H1C3R0WT

TYPICAL ELECTRICAL CHARACTERISTICS

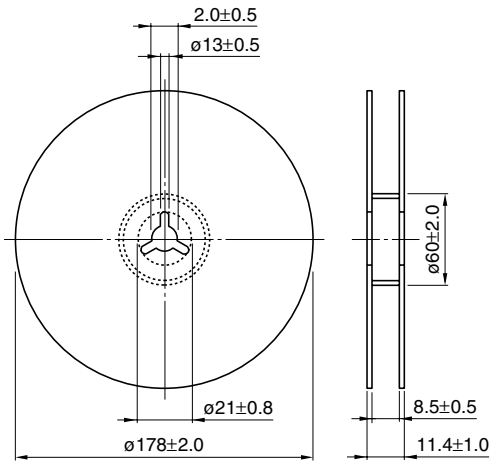
SRF vs. CAPACITANCE CHARACTERISTICS



Measurement condition
- Network analyzer: Agilent N5230A
- Calibration: TRL
- PCB: Shunt-Thru
  t=0.4mm εr=2.17

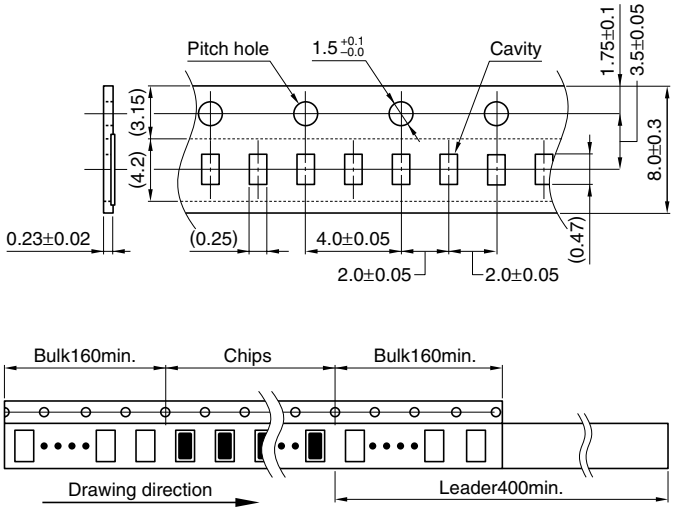
PACKAGING STYLES

REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm