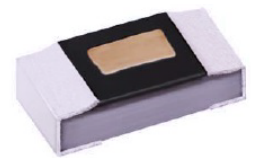


# HIGH Q THIN FILM CHIP INDUCTORS

ATFC-0402HQ



RoHS/RoHS II



1.0 x 0.5 x 0.32 mm

## FEATURES:

- Photolithographic single layer ceramic chip
- High SRF, excellent Q, superior temperature stability
- Tight tolerance  $\pm 0.1\text{nH}$  available
- Self resonant frequency controlled within 10%
- Stable inductance in high frequency circuit
- Highly stable design for critical needs

## APPLICATIONS:

- Cell phones and GPS
- VCO, TCXO Circuit and RF Transceiver Module
- Wireless LAN, Bluetooth Module, Communication Appliances

## STANDARD SPECIFICATIONS:

### PARAMETERS

|                         |                                               |
|-------------------------|-----------------------------------------------|
| ABRACON P/N:            | ATFC-0402HQ                                   |
| Operating temperature : | -40°C to +85°C                                |
| Storage temperature:    | 25 $\pm$ 3°C; Humidity <80%RH in Tape & Reel. |

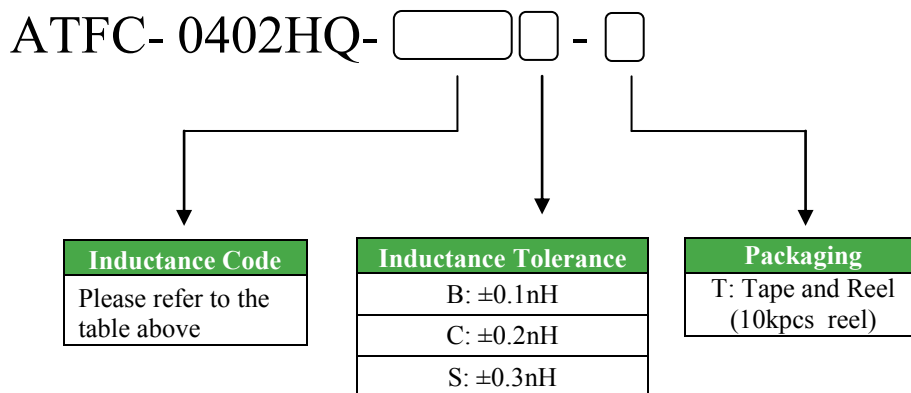
| Part Number<br>ATFC-0402HQ-<br>Inductance Code | L(nH) | Tolerance | Q, Min @ 500MHz | SRF Min<br>(GHz) | R <sub>DC</sub> Max<br>( $\Omega$ ) | I <sub>DC</sub> Max<br>(mA) |
|------------------------------------------------|-------|-----------|-----------------|------------------|-------------------------------------|-----------------------------|
| ATFC-0402HQ-1N3                                | 1.3   | B, C, S   | 16              | 7                | 0.12                                | 730                         |
| ATFC-0402HQ-1N5                                | 1.5   | B, C, S   | 16              | 7                | 0.14                                | 730                         |
| ATFC-0402HQ-1N8                                | 1.8   | B, C, S   | 16              | 7                | 0.14                                | 650                         |
| ATFC-0402HQ-3N1                                | 3.1   | B, C, S   | 16              | 7                | 0.20                                | 500                         |
| ATFC-0402HQ-3N9                                | 3.9   | B, C, S   | 16              | 7                | 0.20                                | 500                         |
| ATFC-0402HQ-4N7                                | 4.7   | B, C, S   | 16              | 7                | 0.50                                | 330                         |

## Test Conditions and Equipments

### Inductance (L)

- Test equipment: Agilent4287A+Agilent16196C
- Test frequency: 500MHz

## PART IDENTIFICATION:



# HIGH Q THIN FILM CHIP INDUCTORS

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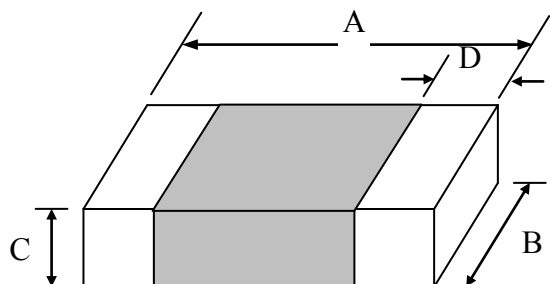


RoHS/RoHS II



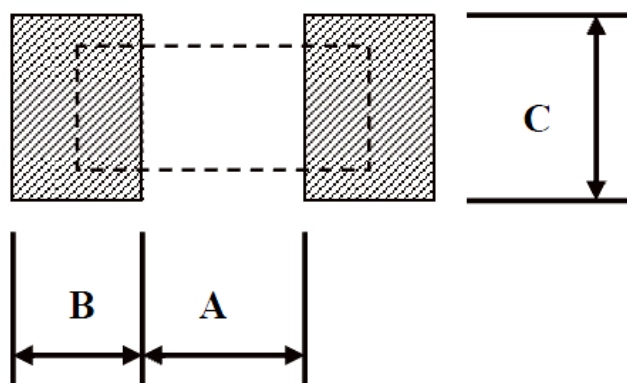
1.0 x 0.5 x 0.32 mm

## OUTLINE DIMENSIONS:



| A        | B        | C         | D         |
|----------|----------|-----------|-----------|
| 1.0±0.05 | 0.5±0.05 | 0.32±0.05 | 0.20±0.10 |

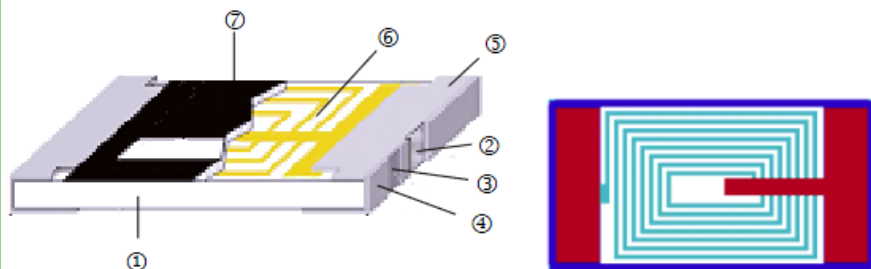
## Recommended Land Pattern



| A    | B    | C        |
|------|------|----------|
| 0.50 | 0.45 | 0.60±0.2 |

Dimension: mm

## Materials



| No. | Material                |
|-----|-------------------------|
| 1   | Alumina Substrate       |
| 2   | Inner Electrode (Ni-Cr) |
| 3   | Barrier Layer (Ni)      |
| 4   | External Electrode (Sn) |
| 5   | Edge Electrode          |
| 6   | Cu Circuits             |
| 7   | Overcoat                |

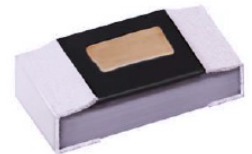


# HIGH Q THIN FILM CHIP INDUCTORS

ATFC-0402HQ

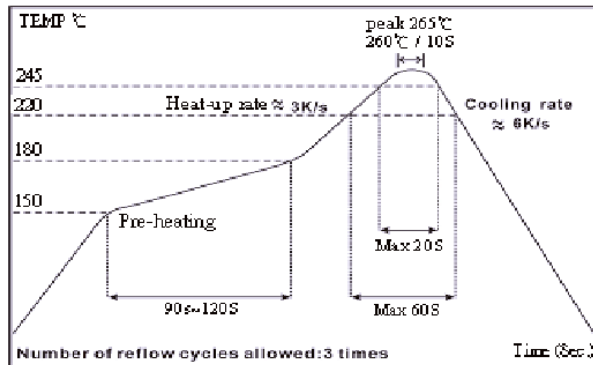


RoHS/RoHS II



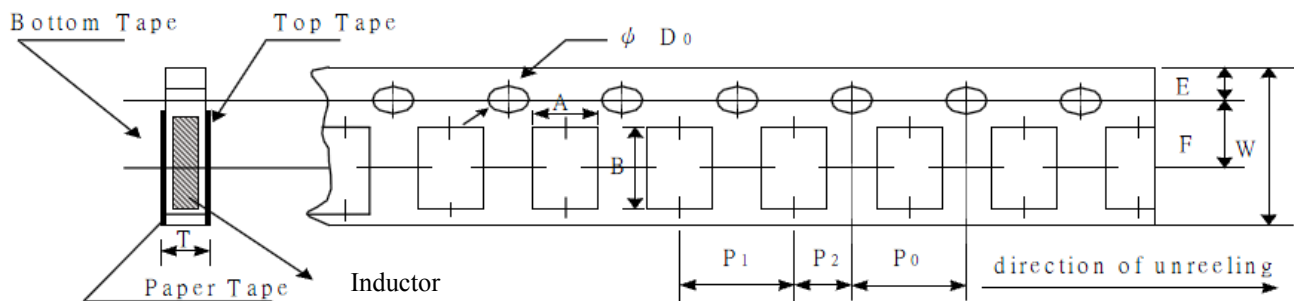
1.0 x 0.5 x 0.32 mm

## REFLOW PROFILE:

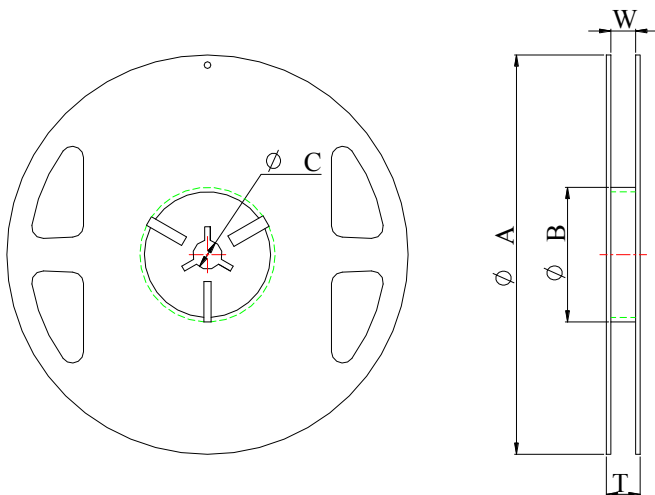


## TAPE & REEL:

T= tape and reel (10,000pcs/reel)



| A         | B         | W         | E         | F         | P <sub>0</sub> | P <sub>1</sub> | P <sub>2</sub> | $\Phi D_0$ | T         |
|-----------|-----------|-----------|-----------|-----------|----------------|----------------|----------------|------------|-----------|
| 0.70±0.05 | 1.16±0.05 | 8.00±0.10 | 1.75±0.05 | 3.50±0.05 | 4.00±0.10      | 2.00±0.05      | 2.00±0.05      | 1.55±0.05  | 0.40±0.03 |



| ΦA        | ΦB       | ΦC       | W       | T        |
|-----------|----------|----------|---------|----------|
| 178.0±1.0 | 60.0±1.0 | 13.5±0.7 | 9.5±1.0 | 11.5±1.0 |

Dimension: mm

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