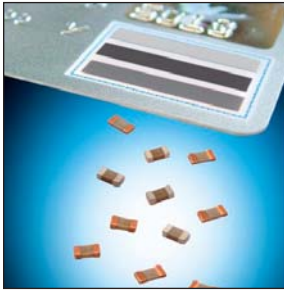


UltraThin Ceramic Capacitors



UT Series

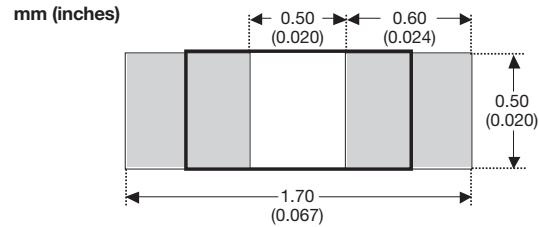
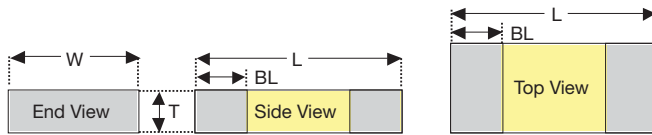


The Ultrathin (UT) series of ceramic capacitors is a new product offering from AVX. The UT series was designed to meet the stringent thickness requirements of our customers. AVX developed a new termination process (FCT - Fine Copper Termination) that provides unbeatable flatness and repeatability. The series includes products < 0.35mm in height and is targeted for applications such as Smart cards, Memory modules, High Density SIM cards, Mobile phones, MP3 players, and embedded solutions.

HOW TO ORDER

| | | | | | | | | | |
|----------------------------|--------------------------|--|---|--|-------------------------------|--|---|---|---|
| UT | 02 | 3 | D | 103 | M | A | T | 2 | D |
| Style Ultra Thin | Case Size 0402 | Rated Voltage 6 = 6.3V Z = 10V Y = 16V 3 = 25V 5 = 50V | Temperature Characteristic D = X5R C = X7R | Coded Cap (in pF) 2 Significant Digits + Number of Zeros | Cap Tolerance ± 20% | Termination Style Commercial | Termination T = 100% Sn C = Cu G = Au | Packaging 2 = 7" Reel 15,000 pcs 4 = 13" Reel 50,000 pcs | Thickness D = 0.30mm max E = 0.25mm max F = 0.15mm max (only available in Cu Termination) |

RECOMMENDED SOLDER PAD DIMENSIONS (Sn Termination)



TYPICAL Cu THICKNESS

| | TT |
|-----|-------------|
| µM | 10.0 ± 4.00 |
| mil | 0.40 ± 0.16 |

PART DIMENSIONS

mm (inches)

| Thickness | L | W | T | BL |
|-----------|------------------------------|--------------------------------|----------------------------------|---------------------------------|
| D | 1.00 ± 0.10 (0.039±0.004) | 0.50 ± 0.10 (0.020 ± 0.004) | 0.25 ± 0.05 (0.010 ± 0.002) | 0.27 ± 0.05 (0.0108 ± 0.002) |
| E | 1.00 ± 0.10 (0.039±0.004) | 0.50 ± 0.10 (0.020 ± 0.004) | 0.20 ± 0.05 (0.008 ± 0.002) | 0.27 ± 0.05 (0.0108 ± 0.002) |
| F | 1.00 ± 0.10 (0.039±0.004) | 0.50 ± 0.10 (0.020 ± 0.004) | 0.125 ± 0.025 (0.005 ± 0.001) | 0.27 ± 0.05 (0.0108 ± 0.002) |

CAP RANGE (THICKNESS CODE)

| X5R | Thickness Code | | | | | | | | | |
|----------|----------------|-----|-----|-----|-----|------|-----|-----|------|-----|
| | D | | | | | F | | | | |
| Cap (nF) | 6.3V | 10V | 16V | 25V | 50V | 6.3V | 10V | 16V | 6.3V | 10V |
| 1 | | | | | | | | | | |
| 10 | | | | | | | | | | |
| 22 | | | | | | | | | | |
| 33 | | | | | | | | | | |
| 47 | | | | | | | | | | |
| 68 | | | | | | | | | | |
| 100 | | | | | | | | | | |

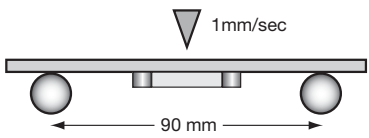
| X7R | Thickness Code | | | | |
|----------|----------------|-----|-----|-----|------|
| | D | | | | |
| Cap (nF) | 6.3V | 10V | 16V | 25V | 6.3V |
| 1 | | | | | |
| 10 | | | | | |



UltraThin Ceramic Capacitors



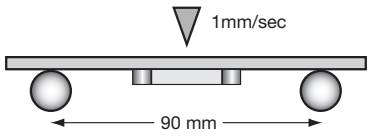
UT Series Specifications and Test Methods – Cu Termination

| Parameter/Test | | Specification Limits | Measuring Conditions |
|---------------------------------------|-----------------------|---|---|
| Operating Temperature Range | | -55°C to +85°C | Temperature Cycle Chamber |
| Capacitance | | Within specified tolerance | Freq.: 1.0 kHz ± 10% |
| Dissipation Factor | | ≤ 3.0% for ≥ 25V DC rating ≤ 12.5% for ≤ 16V DC rating | Voltage: 1.0Vrms ± .2V |
| Insulation Resistance | | 100 MΩ - μF | Charge device with rated voltage for 120 ± 5 secs @ room temp/humidity |
| Dielectric Strength | | No breakdown or visual defects | Charge device with 300% of rated voltage for 1-5 seconds, with charge and discharge current limited to 50 mA (max) |
| Resistance to Flexure Stresses | Appearance | No defects | Deflection: 2mm Test Time: 30 seconds  |
| | Capacitance Variation | ≤ ±12% | |
| | Dissipation Factor | Meets Initial Values (As Above) | |
| | Insulation Resistance | ≥ Initial Value x 0.3 | |
| Load Life | Appearance | No visual defects | Charge device with 1.5X rated voltage in test chamber set at 85°C ± 2°C for 1000 hours (+48, -0) Remove from test chamber and stabilize at room temperature for 24 ± 2 hours before measuring. |
| | Capacitance Variation | ≤ ±20% | |
| | Dissipation Factor | ≤ Initial Value x 2.0 (As Above) | |
| | Insulation Resistance | ≥ Initial Value x 0.3 (As Above) | |
| | Dielectric Strength | Meets Initial Values (As Above) | |

UltraThin Ceramic Capacitors



UT Series Specifications and Test Methods – Sn Termination

| Parameter/Test | | Specification Limits | Measuring Conditions |
|---------------------------------------|-----------------------|--|---|
| Operating Temperature Range | | -55°C to +85°C | Temperature Cycle Chamber |
| Capacitance | | Within specified tolerance | Freq.: 1.0 kHz ± 10% Voltage: 1.0Vrms ± 0.2V |
| Dissipation Factor | | ≤ 3.0% for ≥ 25V DC rating ≤ 12.5% for ≤ 16V DC rating | |
| Insulation Resistance | | 100 MΩ - μF | Charge device with rated voltage for 120 ± 5 secs @ room temp/humidity |
| Dielectric Strength | | No breakdown or visual defects | Charge device with 300% of rated voltage for 1-5 seconds, with charge and discharge current limited to 50 mA (max) |
| Resistance to Flexure Stresses | Appearance | No defects | Deflection: 2mm Test Time: 30 seconds  |
| | Capacitance Variation | ≤ ±12% | |
| | Dissipation Factor | Meets Initial Values (As Above) | |
| | Insulation Resistance | ≥ Initial Value x 0.3 | |
| Solderability | | ≥ 95% of each terminal should be covered with fresh solder | Dip device in eutectic solder at 245 ± 5°C for 5.0 ± 0.5 seconds |
| Resistance to Solder Heat | Appearance | No defects, <25% leaching of either end terminal | Dip device in eutectic solder at 260°C for 60 seconds. Store at room temperature for 24 ± 2 hours before measuring electrical properties. |
| | Capacitance Variation | ≤ ±7.5% | |
| | Dissipation Factor | Meets Initial Values (As Above) | |
| | Insulation Resistance | Meets Initial Values (As Above) | |
| | Dielectric Strength | Meets Initial Values (As Above) | |
| Load Life | Appearance | No visual defects | Charge device with 1.5X rated voltage in test chamber set at 85°C ± 2°C for 1000 hours (+48, -0) Remove from test chamber and stabilize at room temperature for 24 ± 2 hours before measuring. |
| | Capacitance Variation | ≤ ±12% | |
| | Dissipation Factor | ≤ Initial Value x 2.0 (As Above) | |
| | Insulation Resistance | ≥ Initial Value x 0.3 (As Above) | |
| | Dielectric Strength | Meets Initial Values (As Above) | |
| Load Humidity | Appearance | No visual defects | Store in a test chamber set at 85°C ± 2°C/ 85% ± 5% relative humidity for 1000 hours (+48, -0) with rated voltage applied. Remove from chamber and stabilize at room temperature and humidity for 24 ± 2 hours before measuring. |
| | Capacitance Variation | ≤ ±12% | |
| | Dissipation Factor | ≤ Initial Value x 2.0 (As Above) | |
| | Insulation Resistance | ≥ Initial Value x 0.3 (As Above) | |
| | Dielectric Strength | Meets Initial Values (As Above) | |

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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