

UZT 4.5mmL Chip Type, Wide Temperature Range



- Chip type with 4.5mm height, operating over wide temperature range of -40 to $+105^{\circ}\text{C}$.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.

Specifications

| Item | Performance Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|--|--|--|--|----|----|----|--------------------|--|--|--|--|--|--------------|---|--|--|--|--|--|-----------------|---|--|--|--|--|--|
| Category Temperature Range | -40 to $+105^{\circ}\text{C}$ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3 to 50V | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Capacitance Range | 1 to $100\mu\text{F}$ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | $\pm 20\%$ at 120Hz, 20°C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | After 2 minutes' application of rated voltage at 20°C , leakage current is not more than 0.01CV or $3(\mu\text{A})$, whichever is greater. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tangent of loss angle (tan δ) | Measurement frequency : 120Hz at 20°C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | | | | |
| Stability at Low Temperature | Measurement frequency : 120Hz | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | | | | | | | | | | | | | | | | | | | | |
| | Impedance ratio ZT / Z20 (MAX.) | Z -25°C / Z $+20^{\circ}\text{C}$ | 6 | 5 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | |
| Endurance | The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C . | | <table border="1"> <tr> <td>Capacitance change</td> <td colspan="2">Within $\pm 25\%$ of the initial capacitance value (16V or less)</td> <td colspan="3">Within $\pm 20\%$ of the initial capacitance value (25V or more)</td> </tr> <tr> <td>tan δ</td> <td colspan="2">300% or less than initial specified value</td> <td colspan="4"></td> </tr> <tr> <td>Leakage current</td> <td colspan="6">Less than or equal to the initial specified value</td> </tr> </table> | | | | | Capacitance change | Within $\pm 25\%$ of the initial capacitance value (16V or less) | | Within $\pm 20\%$ of the initial capacitance value (25V or more) | | | tan δ | 300% or less than initial specified value | | | | | | Leakage current | Less than or equal to the initial specified value | | | | | |
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| tan δ | 300% or less than initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage current | Less than or equal to the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life | After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C , they shall meet the specified values for the endurance characteristics listed above. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Resistance to soldering heat | The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C . The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C . | | <table border="1"> <tr> <td>Capacitance change</td> <td colspan="2">Within $\pm 10\%$ of the initial capacitance value</td> <td colspan="3"></td> </tr> <tr> <td>tan δ</td> <td colspan="6">Less than or equal to the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="6">Less than or equal to the initial specified value</td> </tr> </table> | | | | | Capacitance change | Within $\pm 10\%$ of the initial capacitance value | | | | | tan δ | Less than or equal to the initial specified value | | | | | | Leakage current | Less than or equal to the initial specified value | | | | | |
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| Leakage current | Less than or equal to the initial specified value | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Marking | Black print on the case top. | | | | | | | | | | | | | | | | | | | | | | | | | | |

Chip Type



| | (mm) | | |
|----------|------|-----|-----|
| ϕD | 4 | 5 | 6.3 |
| A | 1.8 | 2.1 | 2.4 |
| B | 4.3 | 5.3 | 6.6 |
| C | 4.3 | 5.3 | 6.6 |
| E | 1.0 | 1.3 | 2.2 |

Type numbering system (Example : 16V $10\mu\text{F}$)



Dimensions

| Cap. (μF) | Code | 6.3 | | 10 | | 16 | | 25 | | 35 | | 50 | |
|------------------------|------|-----|----|-----|----|-----|----|-----|----|-----|----|-----|-----|
| | | 0J | 1A | 1C | 1E | 1V | 1H | | | | | | |
| 1 | 010 | | | | | | | | | | | 4 | 5.4 |
| 2.2 | 2R2 | | | | | | | | | | | 4 | 9.6 |
| 3.3 | 3R3 | | | | | | | | | | | 4 | 12 |
| 4.7 | 4R7 | | | | | | | 4 | 11 | 4 | 13 | 5 | 16 |
| 10 | 100 | | | | | 4 | 16 | 5 | 20 | 5 | 22 | 6.3 | 26 |
| 22 | 220 | 4 | 19 | 5 | 24 | 5 | 26 | 6.3 | 33 | 6.3 | 36 | | |
| 33 | 330 | 5 | 26 | 5 | 30 | 6.3 | 35 | 6.3 | 42 | | | | |
| 47 | 470 | 5 | 32 | 6.3 | 40 | 6.3 | 44 | | | | | | |
| 100 | 101 | 6.3 | 52 | | | | | | | | | | |

Rated ripple current (mA rms) at 105°C 120Hz

Frequency coefficient of rated ripple current

| Frequency | 50 Hz | 120 Hz | 300 Hz | 1 kHz | 10 kHz or more |
|-------------|-------|--------|--------|-------|----------------|
| Coefficient | 0.70 | 1.00 | 1.17 | 1.36 | 1.50 |

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please select UUX(p.170), UUU(p.176) series if high C/V products are required.
- Please refer to page 3 for the minimum order quantity.

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- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Оценку стоимости проекта по компонентам.
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