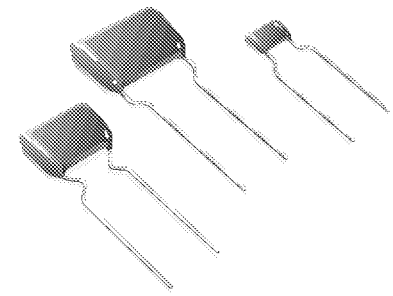
Ceramic Multilayer Radial Leaded Capacitor

Series: ECU-S
Type: C0G



■ Features

- Good thermal stability
- High insulation resistance
- Low dissipation factor
- Low inductance

■ Applications

- Resonant circuits
- Filter circuits
- Timing elements
- Coupling and filtering, particularly in RF circuits

■ Major Specifications

Operating temperature range	–55°C to 125°C
Rated voltage	50 VDC, 100 VDC
Capacitance range	50 VDC: 100–47,000 pF 100 VDC: 4.7–220 pF
Capacitance tolerance	±0.5 pF, ±5%, ±10%
Dielectric strength	200% rated VDC for 10 s
Q factor/dissipation factor	≤ 15%
Insulation resistance	100,000 MΩ or (1,000 MΩ x μF0, whichever is less
Endurance test (1,000 hrs.)	150% rated VDC at 125°C
Temperature coefficient	0±30ppm/°C

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	C	U	□	□	□	□	□	□	□	□	□
Product Code			Style	Rated Voltage		Rated Capacitance			Capacitance Tolerance	Temperature Coefficient	Suffix: Lead Spacing

Style	
S	Bulk
R	Taped and Reel
B	Taped and Bulk

Rated Voltage	
2A	100V
1H	50V

Rated Capacitance	
0R5	0.5 pF
010	1pF
100	10pF
101	100 pF
102	1KpF
103	10KpF

Capacitance Tolerance	
C	±0.25 pF
D	± 0.5 pF
J	±5%
K	±10%
M	±20%

Temperature Coefficient	
C	NP0/C0G
B	X7R
E	Z5U

Suffix: Lead Spacing	
A	2.5mm
B	5.0mm

■ Terminals

- Parallel wire leads, iron-nickel, thinned
- Crimped leads
- Non-standard lead lengths on request

■ Marking

- Rated capacitance, tolerance, manufacturer's logo, ceramic material, voltage

■ Packing

Optionally:

- Taped (reel or ammo pack)
- Bulk

■ Maximum ratings

- Climactic category in accordance with IEC 68-1: 55/125/56

Available capacitance tolerances

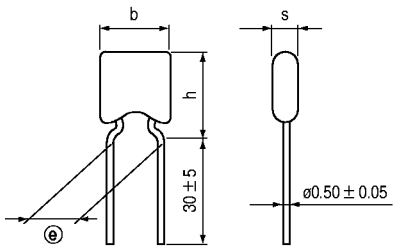
Rated capacitance	Tolerance	Symbol
CR < 10 pF	$\Delta C_R = \pm 0{,}5$ pF	D[1]
	$\Delta C_R = \pm 1{,}0$ pF	F
CR ≥ 10 pF	$\Delta C_R/C_R = \pm 5\%$	J[1]
	$\Delta C_R/C_R = \pm 10\%$	K

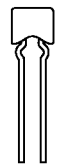
Rated voltage values

V_R = 50 V[2], 100V

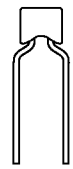
[1] Standard tolerance
[2] Also suitable for 63V applications

■ Dimensions in mm (not to scale)





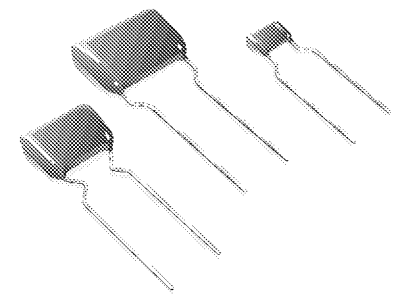
Lead spacing e = $2.5^{+0.6}_{-0.1}$ mm
h max. = 5.5
b max. = 5.0
s max. = 2.5



Lead spacing e = $5.0^{+0.6}_{-0.1}$ mm
h max. = 5.5
b max. = 5.0
s max. = 2.5

Ceramic Multilayer Radial Leaded Capacitor

Series: ECU-S
Type: X7R



■ Features

- High volumetric efficiency
- Non-linear capacitance change
- High insulation resistance
- High pulse strength

■ Applications

- Blocking
- Coupling
- Decoupling
- Interference suppression

■ Major Specifications

Operating temperature range	–55°C to 125°C
Rated voltage	50 VDC, 100 VDC
Capacitance range	50 VDC: 3,300–100,000 pF 100 VDC: 220–33,000 pF
Capacitance tolerance	±10%, ±20%
Dielectric strength	200% rated VDC for 10s
Q factor/dissipation factor	≤2.5%
Insulation resistance	50,000 MΩ or (500 mΩ x μF), whichever is less
Endurance test (1,000 hrs.)	150% rated VDC at 125°C
Temperature coefficient	±15%

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	C	U	□	□	□	□	□	□	□	□	□
Product Code			Style	Rated Voltage		Rated Capacitance			Capacitance Tolerance	Temperature Coefficient	Suffix: Lead Spacing

Style	
S	Bulk
R	Taped and Reel
B	Taped and Bulk

Rated Voltage	
2A	100V
1H	50V

Rated Capacitance	
0R5	0.5 pF
010	1pF
100	10pF
101	100 pF
102	1KpF
103	10KpF

Capacitance Tolerance	
C	±0.25 pF
D	± 0.5 pF
J	±5%
K	±10%
M	±20%

Temperature Coefficient	
C	NPO/COG
B	X7R
E	Z5U

Suffix: Lead Spacing	
A	2.5mm
B	5.0mm

■ Terminals

- Parallel wire leads, iron-nickel, tinned
- Crimped leads
- Non-standard lead lengths on request

■ Marking

- Rated capacitance, tolerance, manufacturer's logo, ceramic material, voltage

■ Packing

Optionally:

- Taped (reel or ammo pack)
- Bulk

■ Maximum ratings

- Climactic category in accordance with IEC 68-1: 55/125/56

Available capacitance tolerances

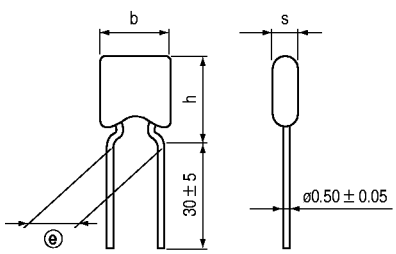
Tolerance	Symbol
$\Delta C_R/C_R = \pm 10\%$	K
$\Delta C_R/C_R = \pm 20\%$	M

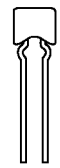
Rated voltage values

V_R = 50 V[1], 100V

[1] Also suitable for 63V applications

■ Dimensions in mm (not to scale)





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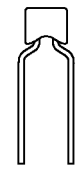
s max. = 2.5



Lead spacing e = $5.0^{+0.6}_{-0.1}$ mm
h max. = 5.5
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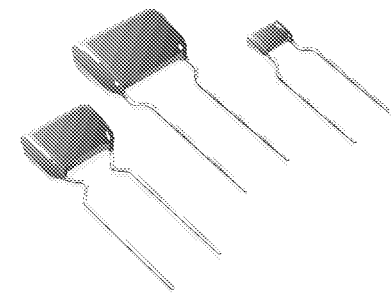
s max. = 2.5

Ceramic Multilayer Radial Leaded Capacitor

Series: ECU-S
Type: Z5U (Y5U)



■ Features

- Extremely high volumetric efficiency
- Non-linear capacitance change

■ Applications

- Blocking
- Coupling
- Decoupling
- Interference suppression

■ Major Specifications

Operating temperature range	+10°C to 85°C
Rated voltage	50 VDC
Capacitance range	0.1µF• 2.2 µF
Capacitance tolerance	20%
Dielectric strength	150% rated VDC for 10 s
Q factor/dissipation factor	≤ 4.0%
Insulation resistance	10,000 MΩ or (10 µΩ x µF), whichever is less
Endurance test (1,000 hrs.)	125% rated VDC at 85°C
Temperature coefficient	±22% / −55%

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	C	U	□	□	□	□	□	□	□	□	□
Product Code			Style	Rated Voltage		Rated Capacitance			Capacitance Tolerance	Temperature Coefficient	Suffix: Lead Spacing

Style	
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Rated Voltage	
2A	100V
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Rated Capacitance	
0R5	0.5 pF
010	1pF
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Capacitance Tolerance	
C	±0.25 pF
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Temperature Coefficient	
C	NPO/COG
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E	Z5U

Suffix: Lead Spacing	
A	2.5mm
B	5.0mm

■ Terminals

- Parallel wire leads, iron-nickel, tinned
- Crimped leads
- Non-standard lead lengths on request

■ Marking

- Rated capacitance, tolerance, manufacturer's logo, ceramic material, voltage

■ Packing

Optionally:

- Taped (reel or ammo pack)
- Bulk

■ Maximum ratings

- Climactic category in accordance with IEC 68-1: 55/125/56

Available capacitance tolerances

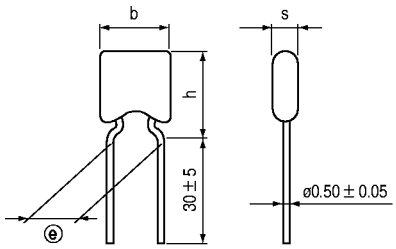
$\Delta C_R / C_R = \pm 20\%$, symbol M

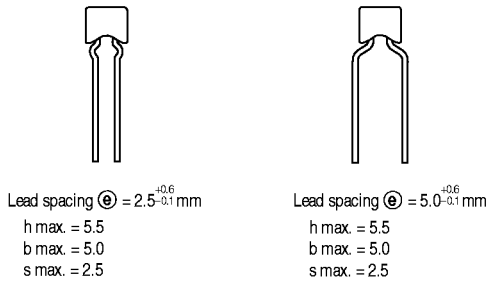
Rated voltage values

$V_R = 50$ V[1]

[1] Also suitable for 63V applications

■ Dimensions in mm (not to scale)





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