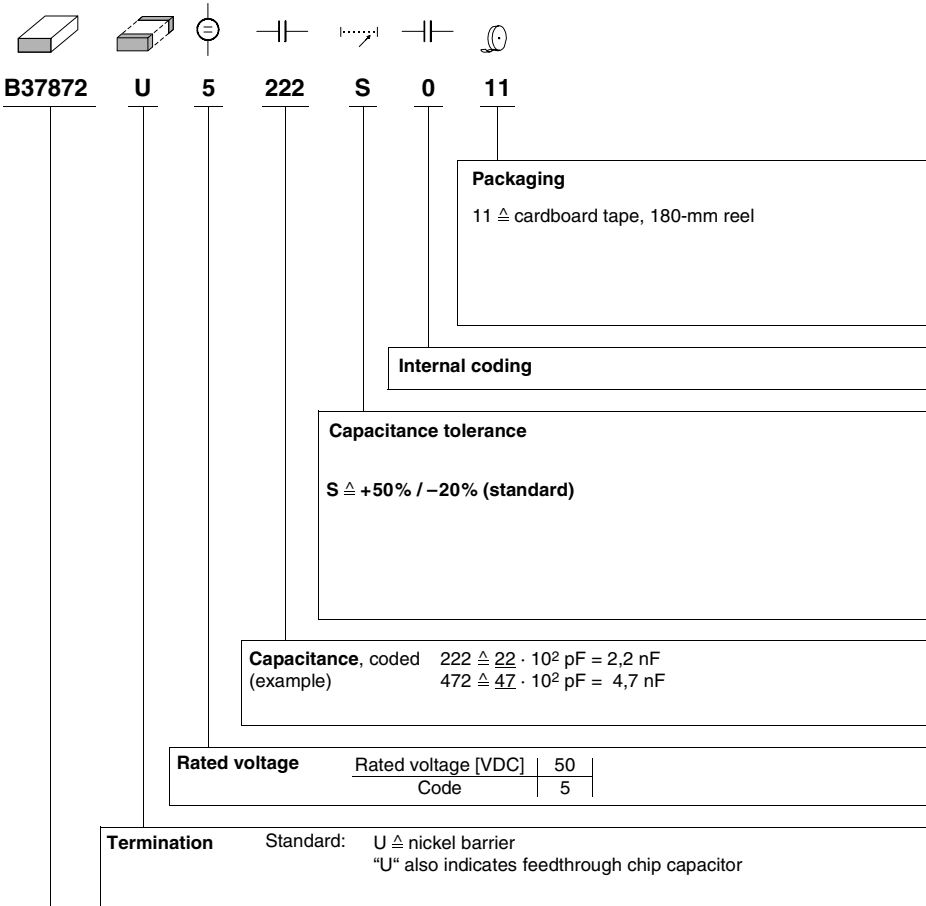


Ordering code system



Type and size	
Chip size (inch / mm)	Temperature characteristic X7R
1206 / 3216	B37872

Features

- Excellent EMI suppression
- Class 2 characteristic
- Low parasitic inductance and low electrical losses
- High attenuation at higher natural resonant frequency
- Space saving on the PCB


Applications

- EMI suppression
- Decoupling and filtering
- Noise suppression and broadband I/O filtering
- Automotive brake systems (e.g. ABS)
- Hall sensors

Termination

- For soldering: 4 terminations, nickel-barrier terminations (Ni)

Options

- Alternative capacitance values, capacitance tolerances, COG characteristic and feedthrough arrays available on request

Delivery mode

- Cardboard tape, 180-mm reel

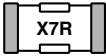
Electrical data

Temperature characteristic		X7R	
Climatic category (IEC 60068-1)		55/125/66	
Standard		EIA	
Dielectric		Class 2	
Rated voltage ¹⁾	V_R	50	VDC
Test voltage	V_{test}	$2,5 \cdot V_R/5$ s	VDC
Capacitance range / E series	C_R	2,2 nF ... 10 nF (E3)	
Max. relative capacitance change	$\Delta C/C$	± 15	%
Dissipation factor (limit value)	$\tan \delta$	$< 25 \cdot 10^{-3}$	
DC resistance	R_{DC}	< 600	m Ω
Insulation resistance ²⁾ at + 25 °C	R_{ins}	$> 10^5$	M Ω
Insulation resistance ²⁾ at +125 °C	R_{ins}	$> 10^4$	M Ω
Time constant ²⁾ at + 25 °C	τ	> 1000	s
Time constant ²⁾ at +125 °C	τ	> 100	s
Operating temperature range	T_{op}	-55 ... +125	°C
Ageing ³⁾		yes	

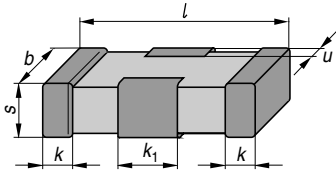
1) Note: No operation on AC line.

2) For $C_R > 10$ nF the time constant $\tau = C \cdot R_{ins}$ is given.

3) Refer to chapter "General Techn. Inform.," page 197.


Capacitance tolerances

Code letter	S (standard)
Tolerance	+50/-20%

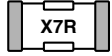
Dimensional drawing


KKE0328-F

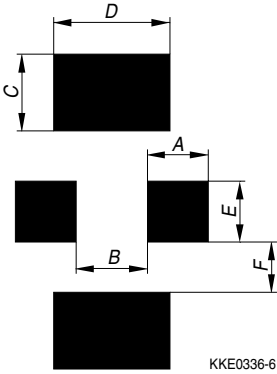
Dimensions (mm)

Case size (inch) (mm)	1206 3216
<i>l</i>	$3,2 \pm 0,20$
<i>b</i>	$1,6 \pm 0,15$
<i>s</i>	0,9 max.
<i>k</i>	$0,4 \pm 0,2$
<i>k</i> ₁	$1,0 \pm 0,35$
<i>u</i>	$0,2 +0,2/-0,1$

Tolerances to CECC 32101-801



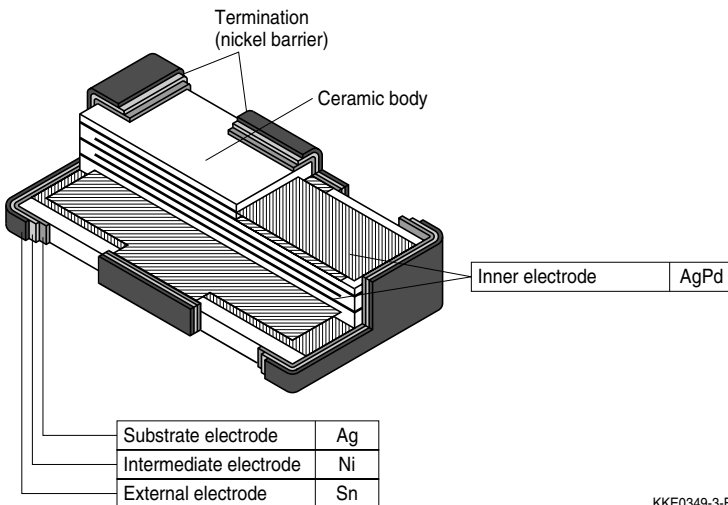
Recommended solder pad



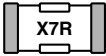
Maximum dimensions (mm)

Case size	(inch/mm)	Type	A	B	C	D	E	F
	1206/3216	feedthrough chip	0,85	1,02	1,09	1,65	0,85	0,71

Termination



KKE0349-3-E


Product range feedthrough capacitors

	X7R
Size ¹⁾	
inch	1206
mm	3216
Type	B37872
V_R (VDC)	50
C_R	
2,2 nF	
4,7 nF	
10 nF	

Ordering codes and packing for X7R feedthrough capacitors, 50 VDC, nickel-barrier terminations

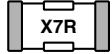
C_R ²⁾	Ordering code	Chip thickness mm	Cardboard tape, Ø 180-mm reel
			** Δ 11
			pcs/reel

Case size 1206, 50 VDC

2,2 nF	B37872U5222S0**	0,8 ± 0,1	4000
4,7 nF	B37872U5472S0**	0,8 ± 0,1	4000
10 nF	B37872U5103S0**	0,8 ± 0,1	4000

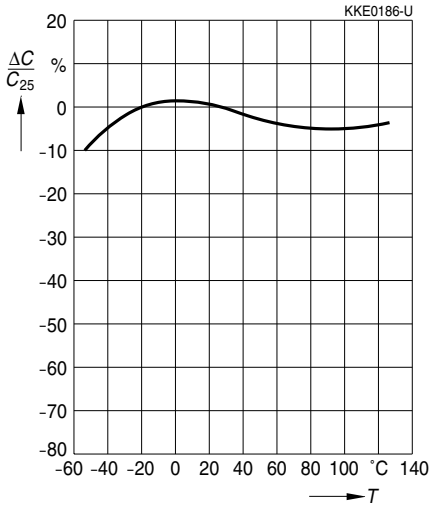
1) $l \times b$ (inch) / $l \times b$ (mm)

2) Other capacitance values on request.

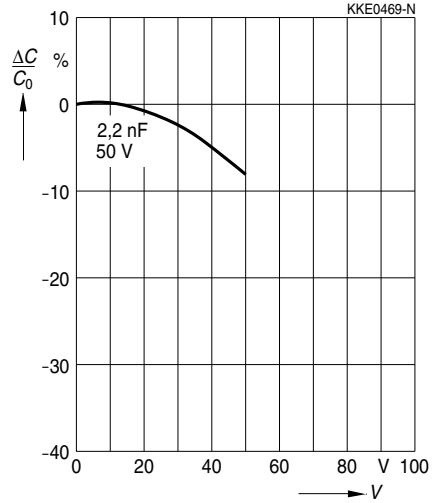


Typical characteristics

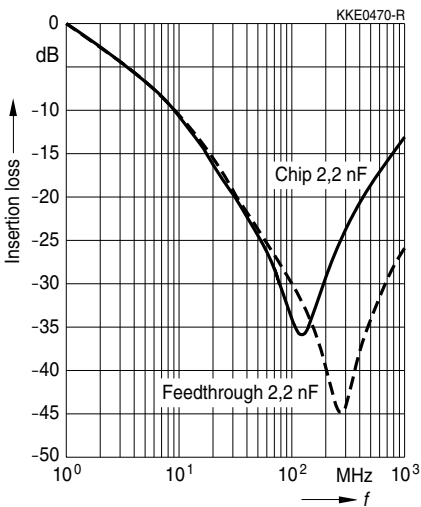
Capacitance change $\Delta C/C_{25}$ versus temperature T



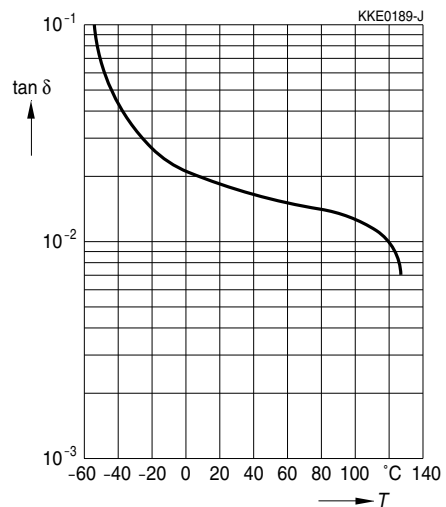
Capacitance change $\Delta C/C_0$ versus superimposed DC voltage V

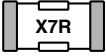


Insertion loss dB versus frequency f



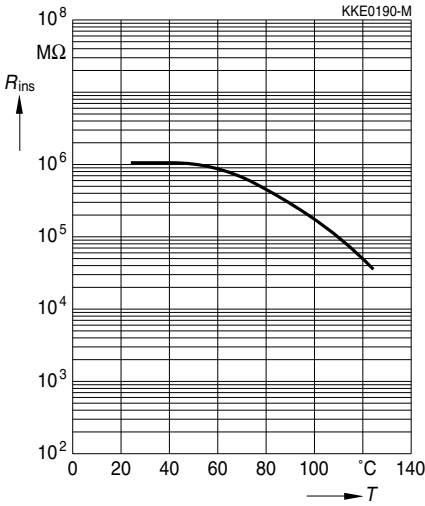
Dissipation factor $\tan \delta$ versus temperature T



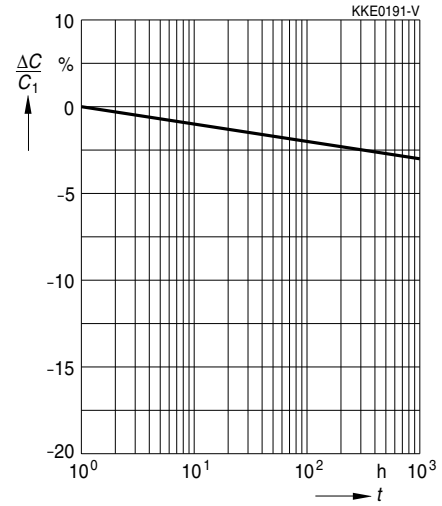


Typical characteristics

Insulation resistance R_{ins} versus temperature T



Capacitance change $\Delta C/C_1$ versus time t



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