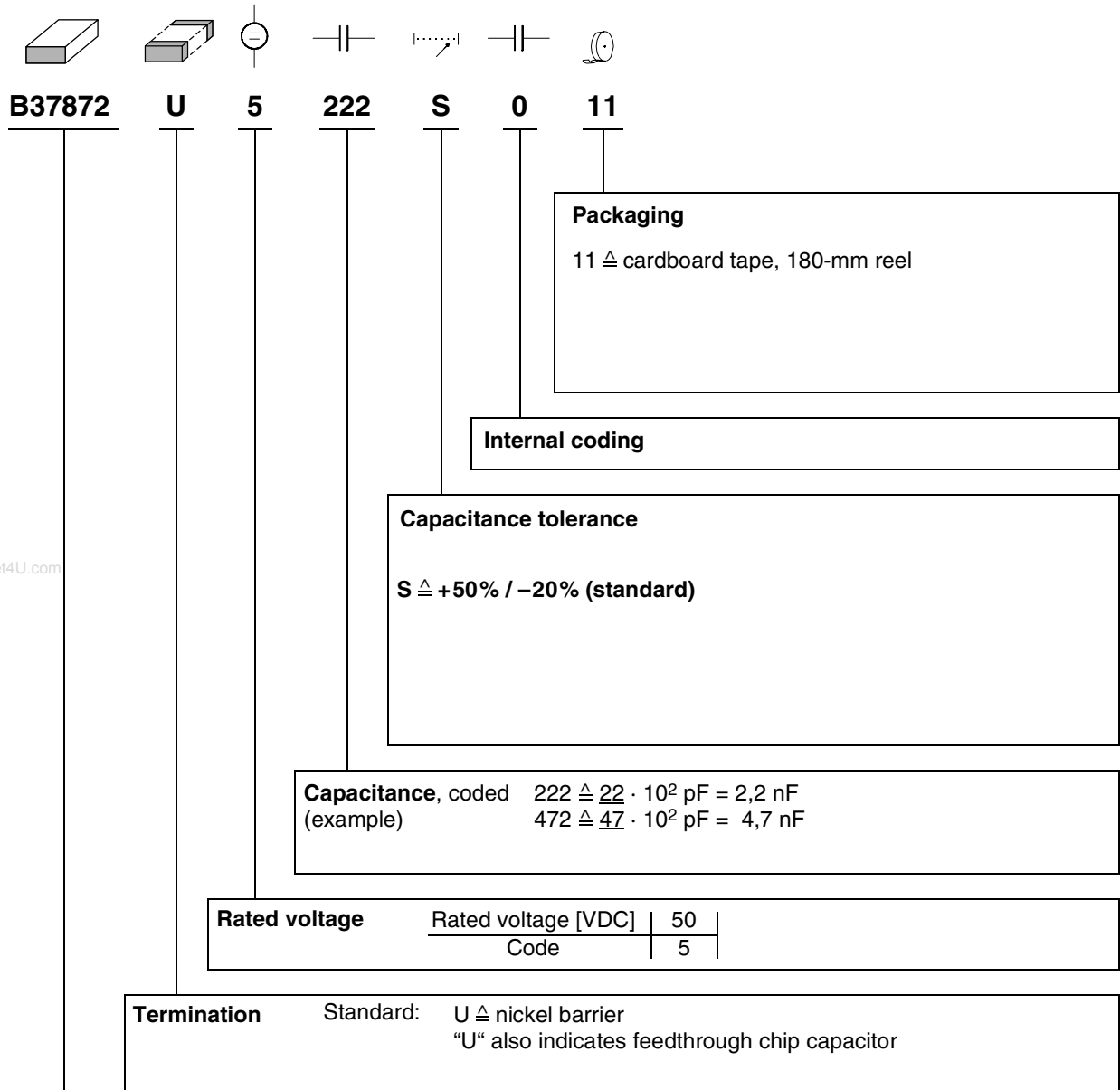


Ordering code system



v DataSheet4U.com

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, C0G characteristic and feedthrough arrays available on request

Delivery mode

- Cardboard tape, 180-mm reel

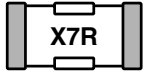
Electrical data

Temperature characteristic		X7R	
Climatic category (IEC 60068-1)		55/125/56	
Standard		EIA	
Dielectric		Class 2	
Rated voltage ¹⁾	V_R	50	VDC
Test voltage	V_{test}	$2,5 \cdot V_R/5 \text{ s}$	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	

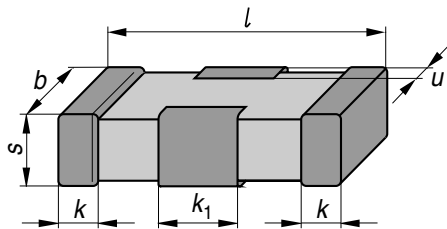
1) Note: No operation on AC line.

2) For $C_R > 10 \text{ nF}$ 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%

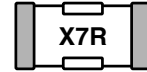
Dimensional drawing


KKE0328-F

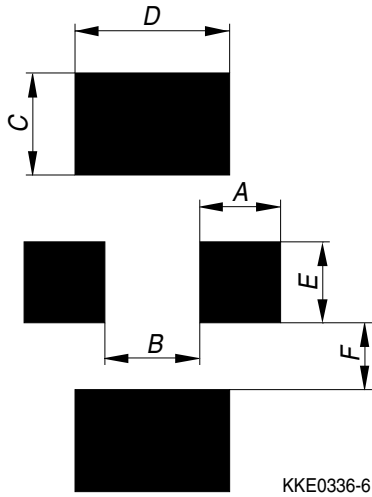
Dimensions (mm)

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>k₁</i>	$1,0 \pm 0,35$
<i>u</i>	$0,2 +0,2/-0,1$

Tolerances to CECC 32101-801



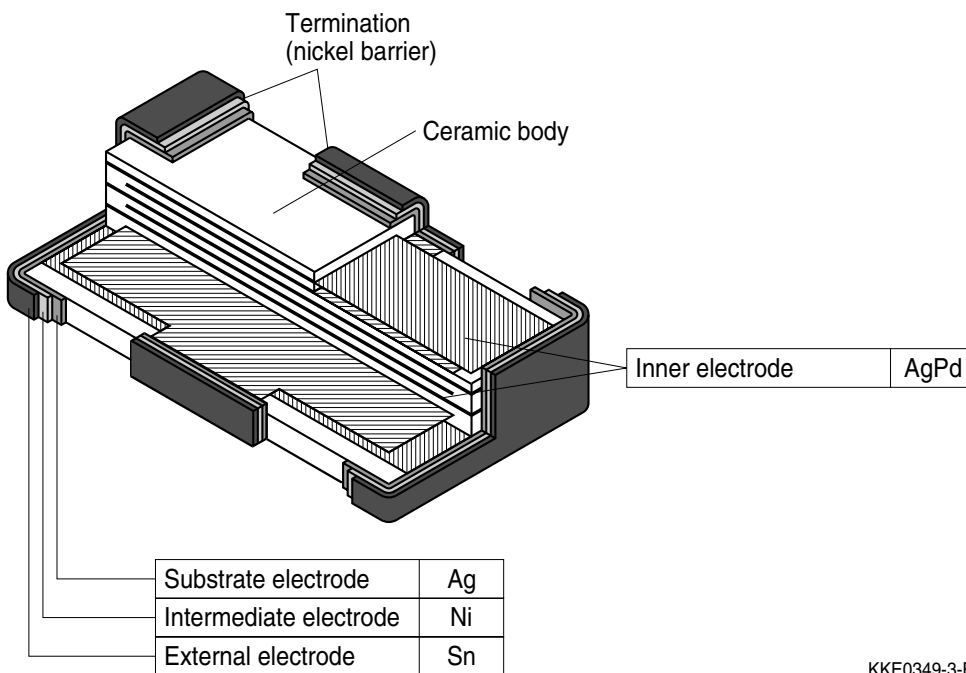
Recommended solder pad

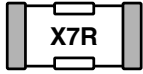


Maximum dimensions (mm)

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




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

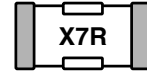
		Chip thickness	Cardboard tape, Ø 180-mm reel
C_R ²⁾	Ordering code	mm	** \triangleq 11
			pcs/reel

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

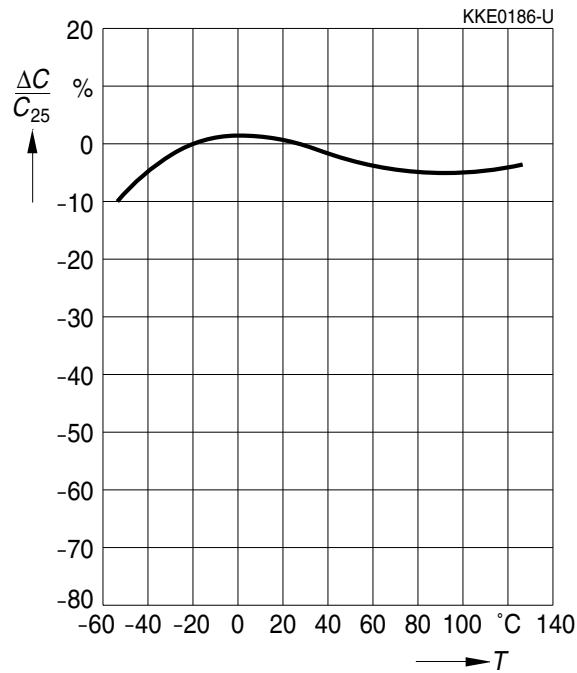
1) $l \times b$ (inch) / $l \times b$ (mm)

2) Other capacitance values on request.

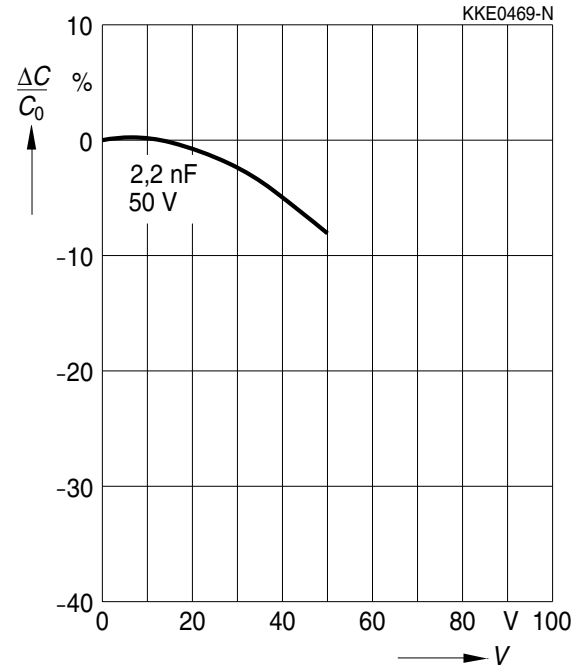


Typical characteristics

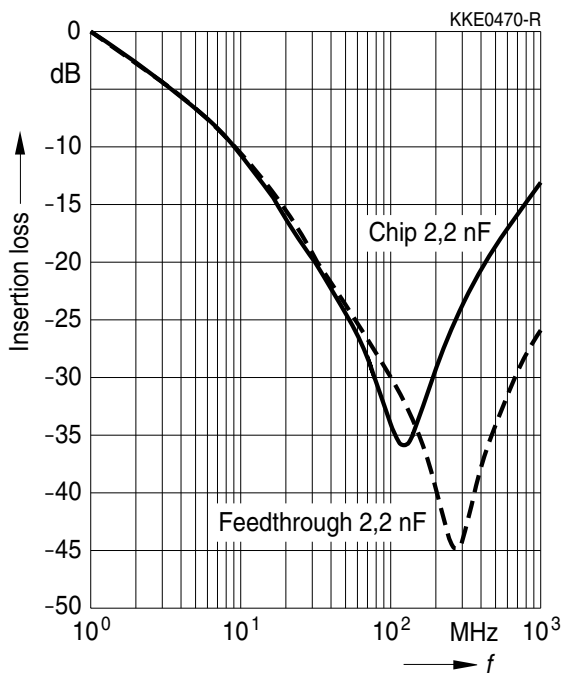
Capacitance change $\Delta C/C_{25}$ versus temperature T



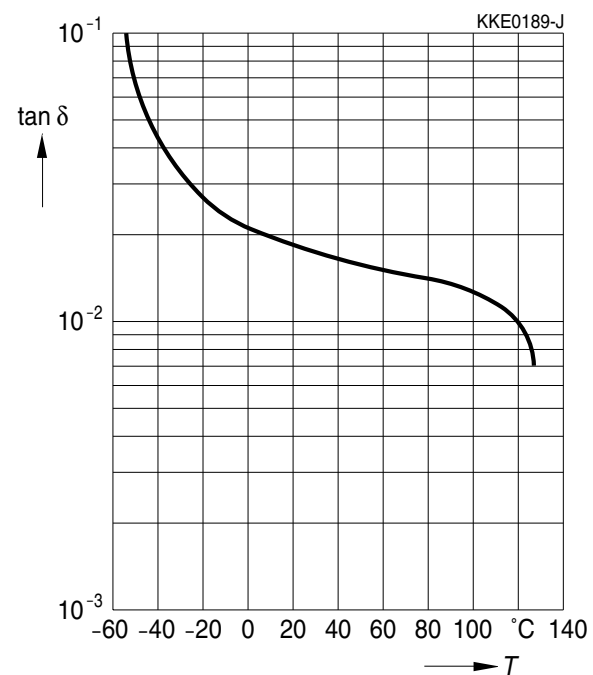
Capacitance change $\Delta C/C_0$ versus superimposed DC voltage V

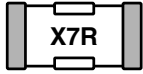


Insertion loss dB versus frequency f



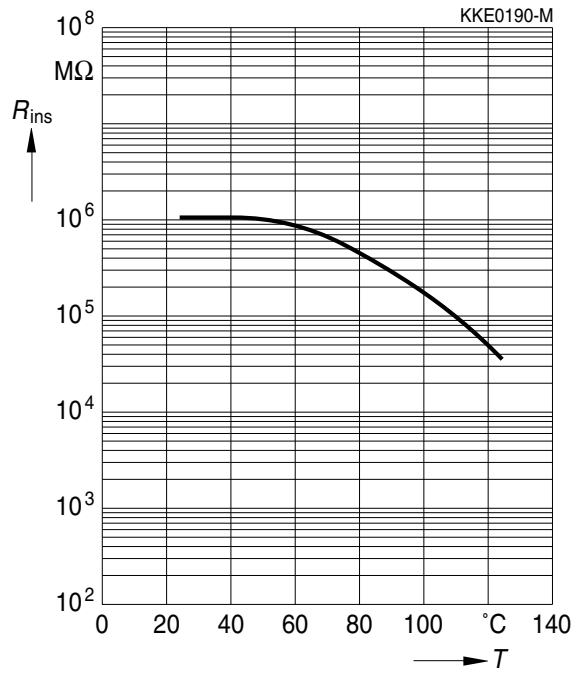
Dissipation factor $\tan \delta$ versus temperature T



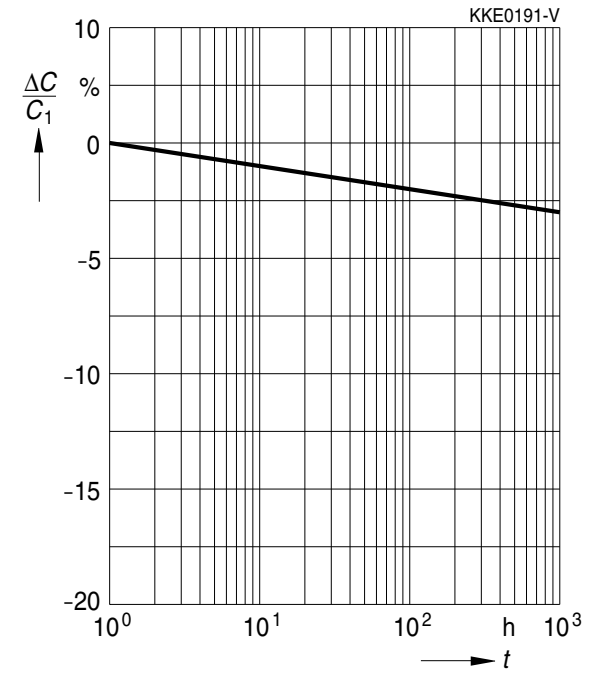


Typical characteristics

Insulation resistance R_{ins} versus temperature T



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



Herausgegeben von EPCOS AG

Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Vervielfältigung, Veröffentlichung, Verbreitung und Verwertung dieser Broschüre und ihres Inhalts ohne ausdrückliche Genehmigung der EPCOS AG nicht gestattet.

Bestellungen unterliegen den vom ZVEI empfohlenen Allgemeinen Lieferbedingungen für Erzeugnisse und Leistungen der Elektroindustrie, soweit nichts anderes vereinbart wird.

Diese Broschüre ersetzt die vorige Ausgabe.

Fragen über Technik, Preise und Liefermöglichkeiten richten Sie bitte an den Ihnen nächstgelegenen Vertrieb der EPCOS AG oder an unsere Vertriebsgesellschaften im Ausland. Bauelemente können aufgrund technischer Erfordernisse Gefahrstoffe enthalten. Auskünfte darüber bitten wir unter Angabe des betreffenden Typs ebenfalls über die zuständige Vertriebsgesellschaft einzuholen.

Published by EPCOS AG

Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.