

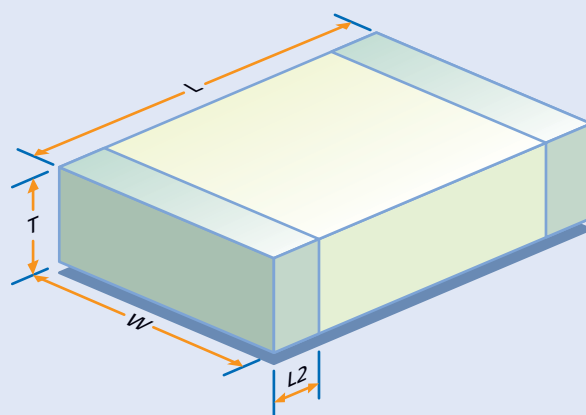
Surface Mount Chip Capacitors

Dimensions

Dimensions

Size	Length (L) mm inches	Width (W) mm inches	Thickness* (T) mm inches max	Termination Band L2 mm inches	
				min	max
0603	1.6 ± 0.2	0.8 ± 0.2	0.8	0.1	0.4
	0.063 ± 0.008	0.031 ± 0.008	0.031	0.004	0.015
0805	2.0 ± 0.3	1.25 ± 0.2	1.3	0.13	0.75
	0.08 ± 0.012	0.05 ± 0.008	0.051	0.005	0.03
1206	3.2 ± 0.3	1.6 ± 0.2	1.6	0.25	0.75
	0.126 ± 0.012	0.063 ± 0.008	0.063	0.01	0.03
1210	3.2 ± 0.3	2.5 ± 0.3	2.0	0.25	0.75
	0.126 ± 0.012	0.10 ± 0.012	0.08	0.01	0.03
1410	3.6 ± 0.3	2.5 ± 0.3	2.0	0.25	0.75
	0.14 ± 0.012	0.1 ± 0.012	0.08	0.01	0.03
1806	4.5 ± 0.35	1.6 ± 0.2	1.3	0.25	0.75
	0.177 ± 0.012	0.063 ± 0.008	0.051	0.01	0.03
1808	4.5 ± 0.35	2.0 ± 0.3	2.0	0.25	1.0
	0.18 ± 0.014	0.08 ± 0.012	0.08	0.01	0.04
1812	4.5 ± 0.35	3.2 ± 0.3	2.5	0.25	1.0
	0.18 ± 0.014	0.126 ± 0.012	0.1	0.01	0.04
1825	4.5 ± 0.35	6.3 ± 0.4	2.5	0.25	1.0
	0.18 ± 0.014	0.25 ± 0.016	0.1	0.01	0.04
2211	5.70 ± 0.4	2.79 ± 0.3	2.5	0.25	0.8
	0.225 ± 0.016	0.110 ± 0.012	0.1	0.01	0.03
2215	5.70 ± 0.4	3.31 ± 0.35	2.5	0.25	0.8
	0.225 ± 0.016	0.15 ± 0.014	0.1	0.01	0.03
2220	5.7 ± 0.4	5.0 ± 0.4	2.5	0.25	1.0
	0.225 ± 0.016	0.197 ± 0.016	0.1	0.01	0.04
2225	5.7 ± 0.4	6.3 ± 0.4	2.5	0.25	1.0
	0.225 ± 0.016	0.25 ± 0.016	0.1	0.01	0.04
3640	9.2 ± 0.5	10.16 ± 0.5	2.5	0.5	1.5
	0.36 ± 0.02	0.40 ± 0.02	0.1	0.02	0.06
5550	14.0 ± 0.5	12.7 ± 0.5	2.5	0.5	1.5
	0.55 ± 0.02	0.50 ± 0.02	0.1	0.02	0.06
8060	20.3 ± 0.5	15.24 ± 0.5	2.5	0.5	1.5
	0.80 ± 0.02	0.60 ± 0.02	0.1	0.02	0.06

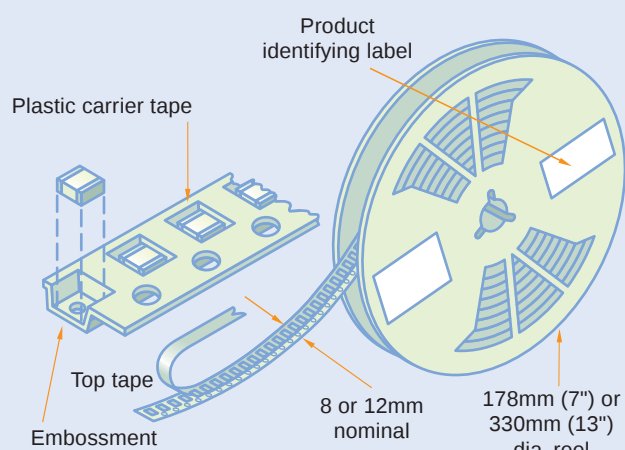
*Please see also pages 18 to 27 for details of thickness by voltage. Specific maximum thicknesses can be supplied to customer order.



Surface Mount Chip Capacitors

Packaging information

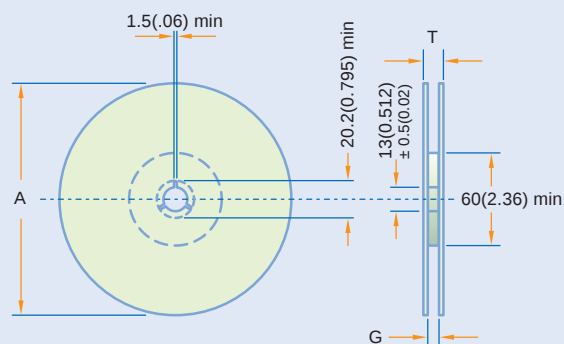
Tape and reel packing of surface mounting chip capacitors for automatic placement are in accordance with IEC60286-3.



Peel force

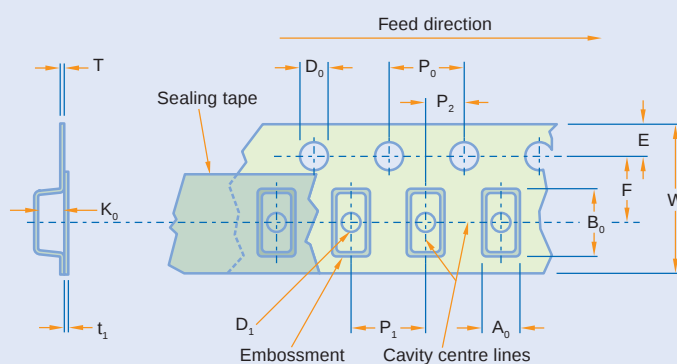
The peel force of the top sealing tape is between 0.2 and 1.0 Newton at 180°. The breaking force of the carrier and sealing tape in the direction of unreeling is greater than 10 Newtons.

Reel dimensions mm (inches)



Symbol	Description	178mm reel	330mm reel
A	Reel diameter	178 (7)	330 (13)
G	Reel inside width	8.4 (0.33)	12.4 (0.49)
T	Reel outside width	14.4 (0.56) max	18.4 (0.72) max

Tape dimensions



Dimensions mm (inches)

Symbol	Description	8mm tape	12mm tape
A ₀ B ₀ K ₀	Width of cavity Length of cavity Depth of cavity	Dependent on chip size to minimize rotation	
W	Width of tape	8.0 (0.315)	12.0 (0.472)
F	Distance between drive hole centres and cavity centres	3.5 (0.138)	5.5 (0.213)
E	Distance between drive hole centres and tape edge	1.75 (0.069)	
P ₁	Distance between cavity centres	4.0 (0.156)	8.0 (0.315)
P ₂	Axial distance between drive hole centres and cavity centres	2.0 (0.079)	
P ₀	Axial distance between drive hole centres	4.0 (0.156)	
D ₀	Drive hole diameter	1.5 (0.059)	
D ₁	Diameter of cavity piercing	1.0 (0.039)	1.5 (0.059)
XT	Carrier tape thickness	0.3 (0.012) ±0.1 (0.004)	0.4 (0.016) ±0.1 (0.004)
Xt ₁	Top tape thickness	0.1 (0.004) max	

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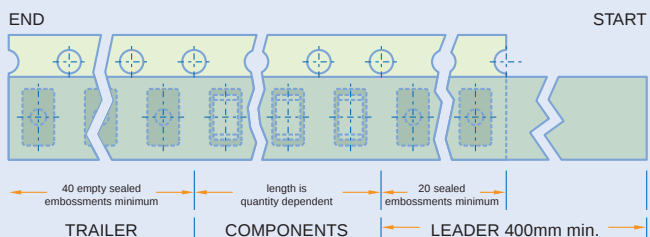
Leader and Trailer

Missing Components

The number of missing components in the tape may not exceed 0.25% of the total quantity with not more than three consecutive components missing. This must be followed by at least six properly placed components.

Identification

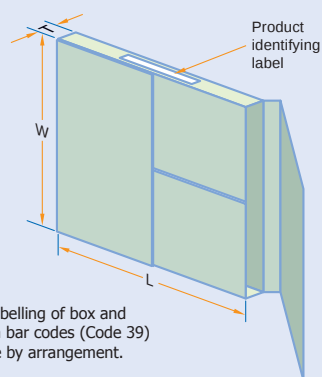
Each reel is labelled with the following information: manufacturer, chip size, capacitance, tolerance, rated voltage, dielectric type, batch number, date code and quantity of components.



Outer Packaging

Outer Carton Dimensions mm (inches) max.

Reel Size	No. of reels	L	W	T
178 (7.0)	1	185 (7.28)	185 (7.28)	25 (0.98)
178 (7.0)	4	190 (7.48)	195 (7.76)	75 (2.95)
330 (13.0)	1	335 (13.19)	335 (13.19)	25 (0.98)



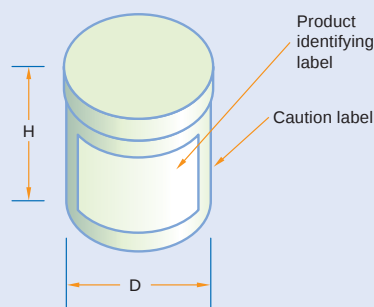
Note: Labelling of box and reel with bar codes (Code 39) available by arrangement.

Bulk Packing - Tubs

Chips are supplied in rigid re-sealable plastic tubs together with impact cushioning wadding. Tubs are labelled with the details: chip size, capacitance, tolerance, rated voltage, dielectric type, batch number, date code and quantity of components.

Dimensions mm (inches)

H	60 (2.36)
D	50 (1.97)



Bulk Packaging-Cassette

Chips can be supplied in a cassette designed for attachment to a surface mount placement machine. The case is made from an anti-static transparent plastic material and can store chips in sizes up to 1206. Labelling is the same as for the bulk tubs.

Capacity

Chip Size	Thickness	Capacity
0603	0.8 (0.031)	15,000
0805	0.6 (0.024)	10,000
1206	0.6 (0.024)	5,000

