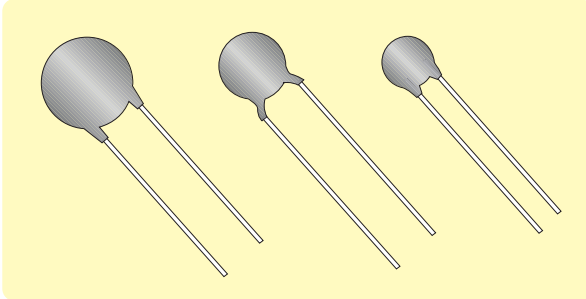


CTC type DC3

Two ranges of miniature disc ceramic capacitors offering a choice of dielectric stability and permittivity. Whilst most values are rated 100V, the Coupling and By-pass range extends to cover the industry standard 0.1µF at 25V and 50V together with two high voltage series rated 1kV and 2kV. A pitch and packaging option is provided on many of the values.



- ◆ Miniature disc sizes
- ◆ Choice of dielectric & pitch
- ◆ Values from 1.0pF to 0.1µF
- ◆ Industry standard 0.1µF at 25V & 50V
- ◆ High voltage (1kV & 2kV) types available
- ◆ Option of loose or taped & boxed
- ◆ Body colour **Orange - Brown**
(2kV types **Blue epoxy**)

Specification

Working voltage DC (as listed)
 Operating temperature range -25°C to +85°C
 Insulation resistance ≥10,000MΩ (≥7,500MΩ C≥0.022µF)
 Dielectric strength 2.5 x working voltage

Manf. Part No. Key (CTC Miniature Disc Ceramics)

DC3	C	820	J	2A	5	T
Type	Dielectric	Value (pF)	Tolerance	Voltage	Pitch	Packaging
Miniature Disc Ceramic	C = NPO P = N150 UJ = N750 B = Y5P F = Z5V/Y5V E = Z5U	3 DIGIT 1st & 2nd = first two numbers of value 3rd = amount of zeros*	C = 0.25pF D = 0.5pF J = 5% K = 10% M = 20% Z = -20,+80%	1E = 25V 1H = 50V 2A = 100V 3A = 1000V 3D = 2000V	1 = 10mm 2 = 2.5mm 5 = 5mm 6 = 6.5mm	Blank = Loose T = Taped

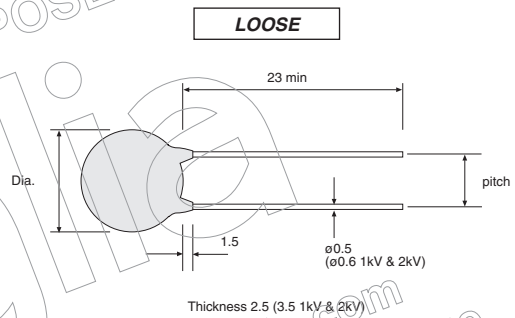
* except values below 10pF where letter B replaces decimal point e.g. 4R7 = 4.7pF

Example shown : NPO 82pF 5% 100V 5mm TAPED

CAPACITORS – CONVERSION GUIDE

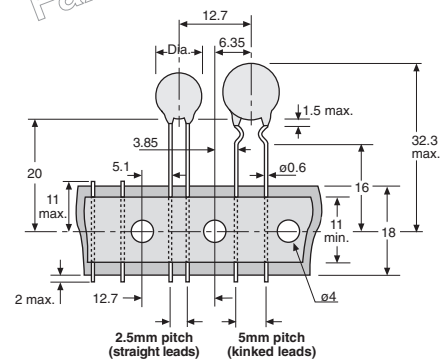
Pico-Farad (pF)	Nano-Farad (nF)	Micro-Farad (µF)
1000	1.0	0.001
1500	1.5	0.0015
2200	2.2	0.0022
3300	3.3	0.0033
4700	4.7	0.0047
6800	6.8	0.0068
10000	10	0.01
15000	15	0.015
22000	22	0.022
33000	33	0.033
47000	47	0.047
68000	68	0.068
100000	100	0.1
150000	150	0.15
220000	220	0.22
330000	330	0.33
470000	470	0.47
680000	680	0.68

Dimensions (mm)



TAPED & BOXED

Taped & reeled product available to special order.



N.B. 5mm pitch taped parts have kinked leads as shown. Straight leads are available to special order.

CTC type DC3

Temperature Compensating Range

Low loss, close tolerance, high stability capacitors for use where a controlled change in capacitance with temperature is required. Choice of pitch with option of loose or taped & boxed where indicated.

LOW K Dielectric NPO (C)

Value (pF)	Tolerance	Dia. max (mm)	2.5mm PITCH		5mm PITCH	
			anglia Loose	anglia Order Code Taped	anglia Loose	anglia Order Code Taped
100 Volt						
1.0	0.25pF	5	099101	099101T	099101A	099101AT
1.2	0.25pF	5	099102	099102T	-	-
1.5	0.25pF	5	099103	099103T	099103A	099103AT
1.8	0.25pF	5	099104	099104T	-	-
2.2	0.25pF	5	099105	099105T	099105A	099105AT
2.7	0.25pF	5	099106	099106T	-	-
3.3	0.25pF	5	099107	099107T	099107A	099107AT
3.9	0.25pF	5	099108	099108T	-	-
4.7	0.25pF	5	099109	099109T	099109A	099109AT
5.6	0.5pF	5	099110	099110T	-	-
6.8	0.5pF	5	099111	099111T	099111A	099111AT
8.2	0.5pF	5	099112	099112T	-	-
10	5%	5	099113	099113T	099113A	099113AT
12	5%	5	099114	099114T	-	-
15	5%	5	099115	099115T	099115A	099115AT
18	5%	5	099116	099116T	-	-
22	5%	5	099117	099117T	099117A	099117AT
27	5%	5	099118	099118T	-	-
33	5%	5	099119	099119T	099119A	099119AT
36	5%	5	099126	099126T	099126A	099126AT
39	5%	5	099120	099120T	-	-
47	5%	5	099121	099121T	099121A	099121AT
56	5%	6	099122	099122T	-	-
68	5%	6	099123	099123T	099123A	099123AT
82	5%	7	-	-	099124A	099124AT
100	5%	7	-	-	099125A	099125AT

LOW K Dielectric N150 (P)

Value (pF)	Tolerance	Dia. max (mm)	2.5mm PITCH		5mm PITCH	
			anglia Loose	anglia Order Code Taped	anglia Loose	anglia Order Code Taped
100 Volt						
22	5%	5	099217	-	099217A	-
27	5%	5	099218	-	-	-
33	5%	5	099219	-	099219A	-
39	5%	5	099220	-	-	-
47	5%	6	099221	-	099221A	-
56	5%	6	099222	-	-	-
68	5%	7	099223	-	099223A	-
82	5%	8	099224	-	-	-
100	5%	8	099225	-	099225A	-
120	5%	8	099226	-	-	-
150	5%	9	099227	-	099227A	-
180	5%	11	099228	-	-	-

LOW K Dielectric N750 (UJ)

Value (pF)	Tolerance	Dia. max (mm)	2.5mm PITCH		5mm PITCH	
			anglia Loose	anglia Order Code Taped	anglia Loose	anglia Order Code Taped
100 Volt						
82	5%	7	099324	099324T	-	-
100	5%	7	099325	099325T	099325A	099325AT

Tip colour indicates dielectric:
Black - NPO Orange - N150 Violet - N750

Coupling and By-pass Range

High permittivity capacitors for coupling and by-pass applications or frequency discriminating circuits where low losses and high stability are not of major importance. Choice of pitch with option of loose or taped & boxed where indicated.

MEDIUM K Dielectric Y5P (B)

Value (pF)	Tolerance	Dia. max (mm)	2.5mm PITCH		5mm PITCH	
			anglia Loose	anglia Order Code Taped	anglia Loose	anglia Order Code Taped
100 Volt						
100	10%	5	099525	099525T	099525A	099525AT
120	10%	5	099526	099526T	-	-
150	10%	5	099527	099527T	099527A	099527AT
180	10%	5	099528	099528T	-	-
220	10%	5	099529	099529T	099529A	099529AT
270	10%	5	099530	099530T	-	-
330	10%	5	099531	099531T	099531A	099531AT
390	10%	5	099532	099532T	099532A	099532AT
470	10%	5	099533	099533T	099533A	099533AT
560	10%	5	099534	099534T	099534A	099534AT
680	10%	5	099535	099535T	099535A	099535AT
820	10%	5	099536	099536T	-	-
1000	10%	5	099537	099537T	099537A	099537AT
1200	10%	5	099538	099538T	-	-
1500	10%	5	099539	099539T	099539A	099539AT
1800	10%	5	099540	099540T	-	-
2200	10%	6	099541	099541T	099541A	099541AT
2700	10%	6	099542	099542T	-	-
3300	10%	7	099543	099543T	099543A	099543AT
3900	10%	7	099544	099544T	-	-
4700	10%	8	099545	099545T	099545A	099545AT

HIGH K Dielectric Z5V (F)

Value (µF)	Tolerance	Dia. max (mm)	2.5mm PITCH	5mm PITCH
100 Volt				
0.01	-20+80%	6	099649	099649A
0.022	-20+80%	8.5	099653	099653A
0.047	-20+80%	11	-	099657A

HIGH K Semi-conductor Dielectric Y5V (F)

Value (µF)	Tolerance	Dia. max (mm)	2.5mm PITCH	5mm PITCH
50 Volt				
0.047	-20+80%	6	-	099035A
Industry standard decoupling capacitors :				
25 Volt				
0.1	-20+80%	6	-	099000A
50 Volt				
0.1	-20+80%	6	-	099761A

HIGH VOLTAGE Supplied loose only.

MEDIUM K Dielectric Y5P (B)

Value (pF)	Tolerance	Dia. max (mm)	5mm PITCH	
			anglia Loose	anglia Order Code Taped
2000 Volt				
220	10%	7	-	099829A
470	10%	9	-	099833A
1000	10%	9	-	099837A

HIGH K Dielectric Z5U (E)

Value (µF)	Tolerance	Dia. max (mm)	6.5mm PITCH		5mm PITCH	
			anglia Loose	anglia Order Code Taped	anglia Loose	anglia Order Code Taped
1000 Volt						
0.001	20%	6	099001	-	099001A	-
10mm PITCH						
0.01	20%	12	099002	-	099002A	-

MURATA type DE

A wide range of resin coated, miniature disc ceramic capacitors for high voltage applications. Offers a choice of maximum operating voltage, from 1kV to 6.3kV, in a variety of popular values. The range includes the HR series of 1kV capacitors with an extended temperature range, which are ideally suited for snubber circuits. An option of loose or taped and boxed product is provided on most values. Other capacitor values and tolerances are available to special order.

Note that these devices are not suitable for mains suppression use.



- ◆ Miniature disc sizes
- ◆ Ratings from 1kV to 6.3kV
- ◆ Flame retardant epoxy resin coating
- ◆ Suitable for high density mounting
- ◆ Option of loose or taped & boxed
- ◆ Body colour **Blue**

Specification

Working voltage	DC (as listed)
Capacitance tolerance] see Dielectric Classifications below
Temperature coefficient	
Operating temperature range	-25°C to +85°C
	HR series -25°C to +125°C
Insulation resistance	≥10,000MΩ
Dissipation factor	B & E dielectric ≤2.5% at 1kHz, 5Vrms
	F dielectric ≤5.0% at 1kHz, 5Vrms
	R dielectric ≤0.2% at 1kHz, 5Vrms
	SL dielectric C <22pF : Q ≥400 +20C
	C ≥47pF : Q ≥1000
Dielectric strength	2 x working voltage (5 sec)

Dielectric Classifications

CODE	TYPE	TOLERANCE	TEMP. COEFF.
B	MED K	±10%	±10% over -25°C to +85°C
E	HIGH K	-20,+80%	+20%, -55% over -25°C to +85°C
F	HIGH K	-20,+80%	+30%, -80% over -25°C to +85°C
R	MED K	±10%	±15% over -25°C to +85°C, +15%, -30% over +85°C to +125°C
SL	LOW K	±5%	+350 to 1000ppm°C

Dimensions (mm)

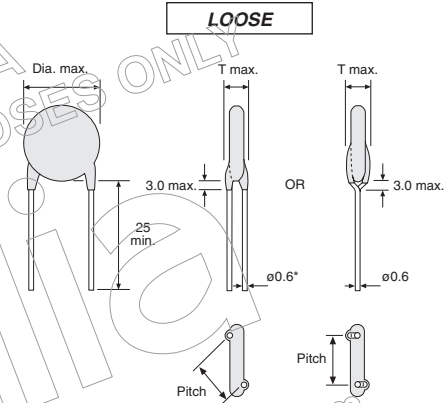


Fig. 1 Fig. 2

For body dimensions Dia. max. and T max., refer to table on opposite page
*Lead dia. 0.5 when body dia. ≤5 (loose parts only)

TAPED & BOXED

Fig. 3

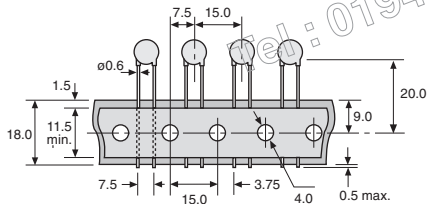


Fig. 4

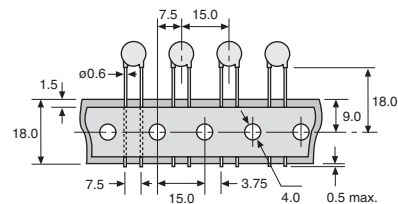


Fig. 5

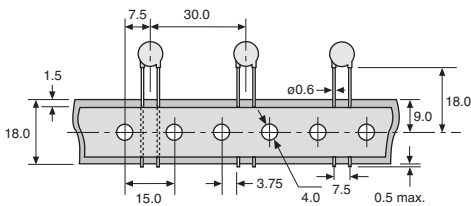
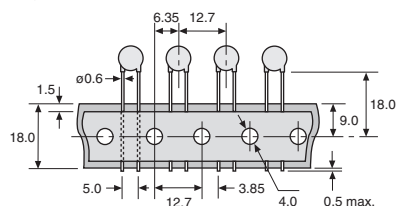


Fig. 6



1kV For general purpose use

Value (pF)	Dielectric	Dimensions (mm)		Pitch	Fig.	Manf. Part No. & anglia Order Code Loose	Fig.	Manf. Part No. & anglia Order Code Taped
		Dia. max.	T max.					
100	B	4.5	4.0	5.0	1	DEBB33A101KC1B	1 + 6	DEBB33A101KP2A
150	B	4.5	4.0	5.0	1	DEBB33A151KC1B	1 + 6	DEBB33A151KP2A
220	B	4.5	4.0	5.0	1	DEBB33A221KC1B	1 + 6	DEBB33A221KP2A
330	B	4.5	4.0	5.0	1	DEBB33A331KC1B	1 + 6	DEBB33A331KP2A
470	B	5.0	4.0	5.0	1	DEBB33A471KC1B	1 + 6	DEBB33A471KP2A
680	B	6.0	4.0	5.0	2	DEBB33A681KA2B	2 + 6	DEBB33A681KN2A
1000	B	6.0	4.0	5.0	2	DEBB33A102KA2B	2 + 6	DEBB33A102KN2A
1000	E	5.0	4.0	5.0	1	DEBE33A102ZC1B	1 + 6	DEBE33A102ZP2A
1500	B	8.0	4.0	5.0	2	DEBB33A152KA2B	2 + 6	DEBB33A152KN2A
2200	F	6.0	4.0	5.0	2	DEBF33A222ZA2B	2 + 6	DEBF33A222ZN2A
3300	B	10.0	4.0	5.0	2	DEBB33A332KA2B	2 + 6	DEBB33A332KN2A
4700	F	7.0	4.0	5.0	2	DEBF33A472ZA2B	2 + 6	DEBF33A472ZN2A
4700	B	12.0	4.0	7.5	2	DEBB33A472KA3B	2 + 4	DEBB33A472KN3A
6800	B	15.0	4.0	7.5	2	DEBB33A682KA3B	2 + 5	DEBB33A682KN7A
(µF)								
0.01	F	10.0	4.0	5.0	2	DEBF33A103ZA2B	2 + 6	DEBF33A103ZN2A
0.01	E	13.0	4.0	7.5	2	DEBE33A103ZA3B	2 + 4	DEBE33A103ZN3A

1kV (HR) For switching power supply snubber circuits

Value (pF)	Dielectric	Dimensions (mm)		Pitch	Fig.	Manf. Part No. & anglia Order Code Loose	Fig.	Manf. Part No. & anglia Order Code Taped
		Dia. max.	T max.					
47	SL	4.5	4.0	5.0	1	DEA1X3A470JC1B	1 + 6	DEA1X3A470JP2A
100	SL	6.0	4.0	5.0	2	DEA1X3A101JA2B	2 + 6	DEA1X3A101JN2A
150	SL	7.0	4.5	5.0	2	DEA1X3A151JA2B	2 + 6	DEA1X3A151JN2A
220	SL	8.0	4.5	5.0	2	DEA1X3A221JA2B	2 + 6	DEA1X3A221JN2A
330	R	7.0	4.5	5.0	2	DEHR33A331KA2B	2 + 6	DEHR33A331KN2A
470	R	7.0	4.5	5.0	2	DEHR33A471KA2B	2 + 6	DEHR33A471KN2A
680	R	8.0	4.5	5.0	2	DEHR33A681KA2B	2 + 6	DEHR33A681KN2A
1000	R	9.0	4.5	5.0	2	DEHR33A102KA2B	2 + 6	DEHR33A102KN2A
1500	R	11.0	4.5	5.0	2	DEHR33A152KA2B	2 + 6	DEHR33A152KN2A
2200	R	13.0	4.5	7.5	2	DEHR33A222KA3B	2 + 4	DEHR33A222KN3A
3300	R	15.0	4.5	7.5	2	DEHR33A332KA3B	2 + 5	DEHR33A332KN7A
4700	R	17.0	4.5	7.5	2	DEHR33A472KA3B	2 + 5	DEHR33A472KN7A

2kV For general purpose use

Value (pF)	Dielectric	Dimensions (mm)		Pitch	Fig.	Manf. Part No. & anglia Order Code Loose	Fig.	Manf. Part No. & anglia Order Code Taped
		Dia. max.	T max.					
100	B	4.5	5.0	5.0	1	DEBB33D101KC1B	1 + 6	DEBB33D101KP2A
150	B	4.5	5.0	5.0	1	DEBB33D151KC1B	1 + 6	DEBB33D151KP2A
220	B	4.5	5.0	5.0	1	DEBB33D221KC1B	1 + 6	DEBB33D221KP2A
330	B	5.0	5.0	5.0	1	DEBB33D331KC1B	1 + 6	DEBB33D331KP2A
470	B	6.0	5.0	5.0	2	DEBB33D471KA2B	2 + 6	DEBB33D471KN2A
680	B	7.0	5.0	5.0	2	DEBB33D681KA2B	2 + 6	DEBB33D681KN2A
1000	B	8.0	5.0	5.0	2	DEBB33D102KA2B	2 + 6	DEBB33D102KN2A
2200	E	8.0	5.0	5.0	2	DEBE33D222ZA2B	2 + 6	DEBE33D222ZN2A
2200	F	9.0	5.0	5.0	2	DEBF33D222ZA2B	2 + 6	DEBF33D222ZN2A
3300	B	12.0	5.0	7.5	2	DEBB33D332KA3B	2 + 4	DEBB33D332KN3A
4700	F	9.0	5.0	5.0	2	DEBF33D472ZA2B	2 + 6	DEBF33D472ZN2A
4700	B	15.0	5.0	7.5	2	DEBB33D472KA3B	2 + 5	DEBB33D472KN7A
(µF)								
0.01	F	12.0	5.0	5.0	2	DEBF33D103ZA2B	2 + 6	DEBF33D103ZN2A
0.01	F	12.0	5.0	7.5	2	DEBF33D103ZA3B	2 + 4	DEBF33D103ZN3A

3.15kV For general purpose use

Value (pF)	Dielectric	Dimensions (mm)		Pitch	Fig.	Manf. Part No. & anglia Order Code Loose	Fig.	Manf. Part No. & anglia Order Code Taped
		Dia. max.	T max.					
100	B	5.0	6.0	7.5	1	DEBB33F101KCDB	1 + 3	DEBB33F101KP3A
220	B	5.0	6.0	7.5	1	DEBB33F221KCDB	1 + 3	DEBB33F221KP3A
470	B	7.0	6.0	7.5	1	DEBB33F471KC3B	1 + 4	DEBB33F471KP3A
680	B	8.0	6.0	7.5	2	DEBB33F681KA3B	2 + 4	DEBB33F681KN3A
1000	E	7.0	6.0	7.5	1	DEBE33F102ZC3B	1 + 4	DEBE33F102ZP3A
1500	E	11.0	6.0	7.5	2	DEBB33F152KA3B	2 + 4	DEBB33F152KN3A
2200	E	10.0	6.0	7.5	2	DEBE33F222ZA3B	2 + 4	DEBE33F222ZN3A
3300	B	15.0	6.0	7.5	2	DEBB33F332KA3B	2 + 5	DEBB33F332KN7A
4700	E	13.0	6.0	7.5	2	DEBE33F472ZA3B	2 + 4	DEBE33F472ZN3A

6.3kV For general purpose use

Value (pF)	Dielectric	Dimensions (mm)		Pitch	Fig.	Manf. Part No. & anglia Order Code Loose
		Dia. max.	T max.			
22	SL	9.0	7.0	10.0	1	DEC1X3J220JC4B
33	SL	9.0	7.0	10.0	1	DEC1X3J330JC4B
47	SL	9.0	7.0	10.0	1	DEC1X3J470JC4B
68	SL	12.0	7.0	10.0	1	DEC1X3J680JC4B
82	SL	12.0	7.0	10.0	1	DEC1X3J820JC4B
100	SL	13.0	7.0	10.0	1	DEC1X3J101JC4B
120	SL	14.0	7.0	10.0	1	DEC1X3J121JC4B
150	SL	15.0	7.0	10.0	1	DEC1X3J151JC4B
220	B	9.0	7.0	10.0	1	DECB33J221KC4B
330	B	9.0	7.0	10.0	1	DECB33J331KC4B
470	B	10.0	7.0	10.0	1	DECB33J471KC4B
680	B	11.0	7.0	10.0	1	DECB33J681KC4B
1000	E	11.0	7.0	10.0	1	DECE33J102ZC4B
2200	E	15.0	7.0	10.0	1	DECE33J222ZC4B