

#### Note

• Lead-spacing 2.5 mm is available for L lead configuration only.

MARKING		
Size 20	Size 25	Size 29 and above
TTT XXX VVVV	TTT XXX VVVV	BC TTT XXXt VVVV

### Note

· Refer to specified part for detail marking.

ORDE	ORDERING CODE INFORMATION										
D	102	K	25	Y5P	L	6	3	J	5	R	
1	2 3 4	5	6 7	8 9 10	11	12	13	14	15	16	
Product Type	Capacitance (pF)	Capacitance Tolerance	Size Code	T.C. Code	Rated Voltage	Lead Diameter	Packaging / Lead Length	Lead Style	Lead Spacing	RoHS Compliant	
D series	The first two digits are the significant figures of capacitance and the last digit is a multiplier as follows:  0 = * 1 1 = * 10 2 = * 100 3 = * 1000		refer to relevant	Please refer to relevant datasheet	$F = 50 V_{DC} \\ H = 100 V_{DC} \\ L = 500 V_{DC}$		3 = bulk T = tape and reel U = ammo	refer to relevant	2 = 2.5 mm 5 = 5.0 mm 6 = 6.4 mm 7 = 7.5 mm		

### **ORDERING CODES**

DIELE	DIELECTRIC SLO (50 V <sub>DC</sub> / 100 V <sub>DC</sub> )										
CAP.		50 V <sub>DC</sub>			100 V <sub>DC</sub>						
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)					
56	D560#20SL0F6###R	5	3.5	D560#20SL0H6###R	5	3.5					
68	D680#20SL0F6###R	5	3.5	D680#20SL0H6###R	5	3.5					
82	D820#20SL0F6###R	5	3.5	D820#20SL0H6###R	5	3.5					
100	D101#20SL0F6###R	5	3.5	D101#20SL0H6###R	5	3.5					

DIELECTRIC SLO (500 V <sub>DC</sub> )									
CAD		500 V <sub>DC</sub>							
CAP. (pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)						
33	D330#20SL0L6###R	5	3.5						
39	D390#20SL0L6###R	5	3.5						
47	D470#20SL0L6###R	5	3.5						
56	D560#20SL0L6###R	5	3.5						
68	D680#20SL0L6###R	6.5	3.5						
82	D820#20SL0L6###R	6.5	3.5						

#### **Notes**

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: ± 5 % = J; ± 10 % = K
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

CAP.		100 V <sub>DC</sub>		500 V <sub>DC</sub>			
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	
6.8	D689C20U2JH6##R	5	3.5	D689C20U2JL6###R	5	3.5	
8.2	D829C20U2JH6##R	5	3.5	D829C20U2JL6###R	5	3.5	
10	D100#20U2JH6###R	5	3.5	D100#20U2JL6###R	5	3.5	
12	D120#20U2JH6###R	5	3.5	D120#20U2JL6###R	5	3.5	
15	D150#20U2JH6###R	5	3.5	D150#20U2JL6###R	5	3.5	
18	D180#20U2JH6###R	5	3.5	D180#20U2JL6###R	5	3.5	
22	D220#20U2JH6###R	5	3.5	D220#20U2JL6###R	5	3.5	
27	D270#20U2JH6###R	5	3.5	D270#25U2JL6###R	6.5	3.5	
33	D330#20U2JH6###R	5	3.5	D330#25U2JL6###R	6.5	3.5	
39	D390#20U2JH6###R	5	3.5	D390#29U2JL6###R	7.5	3.5	
47	D470#20U2JH6###R	5	3.5	D470#29U2JL6###R	7.5	3.5	
56	D560#25U2JH6###R	6.5	3.5	D560#33U2JL6###R	8.5	3.5	
68	D680#25U2JH6###R	6.5	3.5	D680#33U2JL6###R	8.5	3.5	
82	D820#25U2JH6###R	6.5	3.5	D820#39U2JL6###R	10	3.5	
100	D101#29U2JH6###R	7.5	3.5	D101#39U2JL6###R	10	3.5	
120	D121#33U2JH6###R	8.5	3.5	D121#47U2JL6###R	12	3.5	
150	D151#33U2JH6###R	8.5	3.5	D151#47U2JL6###R	12	3.5	
180	D181#39U2JH6###R	10	3.5	/	/	/	
220	D221#39U2JH6###R	10	3.5	/	/	/	
270	D271#39U2JH6###R	10	3.5	/	/	/	
330	D331#47U2JH6###R	12	3.5	/	/	/	

- Lead diameter is 0.5 mm
- #5th digit is capacitance tolerance code: ±2 % = G; ±5 % = J (which C < 10 pF, the tolerance code is C = ±0.25 pF)
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



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DIELE	<b>DIELECTRIC Y5P</b> (50 V <sub>DC</sub> / 100 V <sub>DC</sub> )										
CAP.		50 V <sub>DC</sub>		100 V <sub>DC</sub>							
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)					
100	D101#20Y5PF6###R	5.0	3.5	D101#20Y5PH6###R	5.0	3.5					
150	D151#20Y5PF6###R	5.0	3.5	D151#20Y5PH6###R	5.0	3.5					
180	D181#20Y5PF6###R	5.0	3.5	D181#20Y5PH6###R	5.0	3.5					
220	D221#20Y5PF6###R	5.0	3.5	D221#20Y5PH6###R	5.0	3.5					
330	D331#20Y5PF6###R	5.0	3.5	D331#20Y5PH6###R	5.0	3.5					
470	D471#20Y5PF6###R	5.0	3.5	D471#20Y5PH6###R	5.0	3.5					
680	D681#20Y5PF6###R	5.0	3.5	D681#20Y5PH6###R	5.0	3.5					
1000	D102#20Y5PF6###R	5.0	3.5	D102#20Y5PH6###R	5.0	3.5					
1500	D152#20Y5PF6###R	5.0	3.5	D152#25Y5PH6###R	6.5	3.5					
1800	D182#25Y5PF6###R	6.5	3.5	D182#25Y5PH6###R	6.5	3.5					
2200	D222#25Y5PF6###R	6.5	3.5	D222#25Y5PH6###R	6.5	3.5					
3300	D332#25Y5PF6###R	6.5	3.5	D332#29Y5PH6###R	7.5	3.5					
4700	D472#29Y5PF6###R	7.5	3.5	D472#33Y5PH6###R	8.5	3.5					
6800	D682#33Y5PF6###R	8.5	3.5	D682#39Y5PH6###R	10.0	3.5					
10 000	D103#39Y5PF6###R	10.0	3.5	D103#43Y5PH6###R	11.0	3.5					

DIELECTRIC Y5P (50	DIELECTRIC Y5P (500 V <sub>DC</sub> )								
CAR		500 V <sub>DC</sub>							
CAP. (pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)						
100	D101#20Y5PL6###R	5.0	3.5						
150	D151#20Y5PL6###R	5.0	3.5						
180	D181#20Y5PL6###R	5.0	3.5						
220	D221#20Y5PL6###R	5.0	3.5						
330	D331#20Y5PL6###R	5.0	3.5						
470	D471#20Y5PL6###R	5.0	3.5						
680	D681#25Y5PL6###R	6.5	3.5						
1000	D102#25Y5PL6###R	6.5	3.5						
1500	D152#29Y5PL6###R	7.5	3.5						
1800	D182#29Y5PL6###R	7.5	3.5						
2200	D222#33Y5PL6###R	8.5	3.5						
3300	D332#39Y5PL6###R	10.0	3.5						
4700	D472#43Y5PL6###R	11.0	3.5						
6800	D682#53Y5PL6###R	13.5	3.5						
10 000	D103#69Y5PL6###R	17.5	3.5						

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code:  $\pm$  10 % = K;  $\pm$  20 % = M
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



DIELE	<b>DIELECTRIC Z5U</b> (50 V <sub>DC</sub> / 100 V <sub>DC</sub> )									
CAP.		50 V <sub>DC</sub>		100 V <sub>DC</sub>						
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)				
1000	D102M20Z5UF6###R	5.0	3.5	D102M20Z5UH6###R	5.0	3.5				
1500	D152M20Z5UF6##R	5.0	3.5	D152M20Z5UH6###R	5.0	3.5				
2200	D222M20Z5UF6##R	5.0	3.5	D222M20Z5UH6###R	5.0	3.5				
3300	D332M20Z5UF6###R	5.0	3.5	D332M20Z5UH6###R	5.0	3.5				
4700	D472M20Z5UF6###R	5.0	3.5	D472M25Z5UH6###R	6.5	3.5				
6800	D682M25Z5UF6###R	8.5	3.5	D682M25Z5UH6###R	6.5	3.5				
10 000	D103M29Z5UF6##R	10.0	3.5	D103M29Z5UH6###R	7.5	3.5				
15 000	D153M33Z5UF6##R	8.5	3.5	D153M33Z5UH6###R	8.5	3.5				
22 000	D223M39Z5UF6###R	10.0	3.5	D223M39Z5UH6###R	10.0	3.5				

DIELECTRIC Z5U (500 V <sub>DC</sub> )									
CAP.	500 V <sub>DC</sub>								
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)						
1000	D102M20Z5UL6###R	5.0	3.5						
1500	D152M25Z5UL6###R	6.5	3.5						
2200	D222M25Z5UL6###R	6.5	3.5						
3300	D332M29Z5UL6###R	7.5	3.5						
4700	D472M33Z5UL6###R	8.5	3.5						
6800	D682M39Z5UL6###R	10.0	3.5						
10 000	D103M43Z5UL6###R	11.0	3.5						
15 000	D153M53Z5UL6###R	13.5	3.5						
22 000	D223M59Z5UL6###R	15.0	3.5						

- Lead diameter is 0.6 mm
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



DIELE	<b>DIELECTRIC Y5V</b> (50 V <sub>DC</sub> / 100 V <sub>DC</sub> )										
CAP.		50 V <sub>DC</sub>			100 V <sub>DC</sub>						
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)					
1000	D102Z20Y5VF6###R	5.0	3.5	D102Z20Y5VH6###R	5.0	3.5					
1500	D152Z20Y5VF6###R	5.0	3.5	D152Z20Y5VH6###R	5.0	3.5					
2200	D222Z20Y5VF6###R	5.0	3.5	D222Z20Y5VH6###R	5.0	3.5					
3300	D332Z20Y5VF6###R	5.0	3.5	D332Z20Y5VH6###R	5.0	3.5					
4700	D472Z20Y5VF6###R	5.0	3.5	D472Z25Y5VH6###R	6.5	3.5					
6800	D682Z25Y5VF6###R	6.5	3.5	D682Z25Y5VH6###R	6.5	3.5					
10 000	D103Z29Y5VF6###R	7.5	3.5	D103Z29Y5VH6###R	7.5	3.5					
15 000	D153Z33Y5VF6###R	8.5	3.5	D153Z33Y5VH6###R	8.5	3.5					
22 000	D223Z39Y5VF6###R	10.0	3.5	D223Z39Y5VH6###R	10.0	3.5					

DIELECTRIC Y5V (500 V <sub>DC</sub> )									
CAP.		500 V <sub>DC</sub>							
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)						
1000	D102Z20Y5VL6###R	5.0	3.5						
1500	D152Z20Y5VL6###R	5.0	3.5						
2200	D222Z25Y5VL6###R	6.5	3.5						
3300	D332Z25Y5VL6###R	6.5	3.5						
4700	D472Z29Y5VL6###R	7.5	3.5						
6800	D682Z33Y5VL6###R	8.5	3.5						
10 000	D103Z39Y5VL6###R	10.0	3.5						
15 000	D153Z43Y5VL6###R	11.0	3.5						
22 000	D223Z53Y5VL6###R	13.5	3.5						

### Notes

- Lead diameter is 0.6 mm
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

DIELE	DIELECTRIC Z5V										
CAP.		50 V <sub>DC</sub>			100 V <sub>DC</sub>						
(pF)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)					
4700	D472Z20Z5VF6###R	5.0	3.5	D472Z20Z5VH6###R	6.5	3.5					
10 000	D103Z25Z5VF6###R	6.5	3.5	D103Z25Z5VH6###R	7.5	3.5					
22 000	D223Z29Z5VF6###R	7.5	3.5	D223Z33Z5VH6###R	8.5	3.5					
33 000	D333Z39Z5VF6###R	10.0	3.5	D333Z39Z5VH6###R	10.0	3.5					
47 000	D473Z39Z5VF6###R	10.0	3.5	D473Z43Z5VH6###R	11.0	3.5					

- Lead diameter is 0.6 mm
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6, 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)



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DIELECTRIC X5F				
CAP. (pF)	500 V <sub>DC</sub>			
	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	
100	D101#20X5FL6###R	5.0	3.5	
150	D151#20X5FL6###R	5.0	3.5	
220	D221#20X5FL6###R	5.0	3.5	
330	D331#20X5FL6###R	5.0	3.5	
470	D471#25X5FL6###R	6.5	3.5	
680	D681#25X5FL6###R	6.5	3.5	
1,000	D102#29X5FL6###R	7.5	3.5	
1,500	D152#33X5FL6###R	8.5	3.5	
2,200	D222#39X5FL6###R	10.0	3.5	
3,300	D332#47X5FL6###R	12.0	3.5	
4,700	D472#53X5FL6###R	13.5	3.5	

#### **Notes**

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: ± 10 % = K; ± 20 % = M
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

DIELECTRIC X7R				
CAP. (pF)	500 V <sub>DC</sub>			
	ORDERING CODE	DIAMETER (mm max.)	THICKNESS (mm max.)	
100	D101#20X7RL6###R	5.0	3.5	
150	D151#20X7RL6###R	5.0	3.5	
220	D221#20X7RL6###R	5.0	3.5	
330	D331#20X7RL6###R	5.0	3.5	
470	D471#20X7RL6###R	5.0	3.5	
560	D561#25X7RL6###R	6.5	3.5	
680	D681#25X7RL6###R	6.5	3.5	
1,000	D102#29X7RL6###R	7.5	3.5	
1,500	D152#29X7RL6###R	8.5	3.5	
2,200	D222#39X7RL6###R	10.0	3.5	
3,300	D332#43X7RL6###R	12.0	3.5	
4,700	D472#53X7RL6###R	13.5	3.5	

#### Notes

- Lead diameter is 0.6 mm
- # 5th digit is capacitance tolerance code: ± 10 % = K; ± 20 % = M
- # 13th digit is packaging code: bulk = 3; reel = T; ammo = U
- # 14th digit is lead style code: L; J; K (L and J are preferred lead configuration)
- # 15th digit is lead spacing code: 2.5 mm = 2; 5.0 mm = 5; 6.4 mm = 6; 7.5 mm = 7 (rated voltage 500 V is not available on 2.5 mm lead-spacing)

#### **TAPING AND PACKAGING**

### **LABELLING**

Each reel is provided with a label showing the following details:

manufacturer, D style, capacitance, tolerance, batch number, quantity of components, rated voltage, dielectric.

On special request other designations can be shown.

### For example:

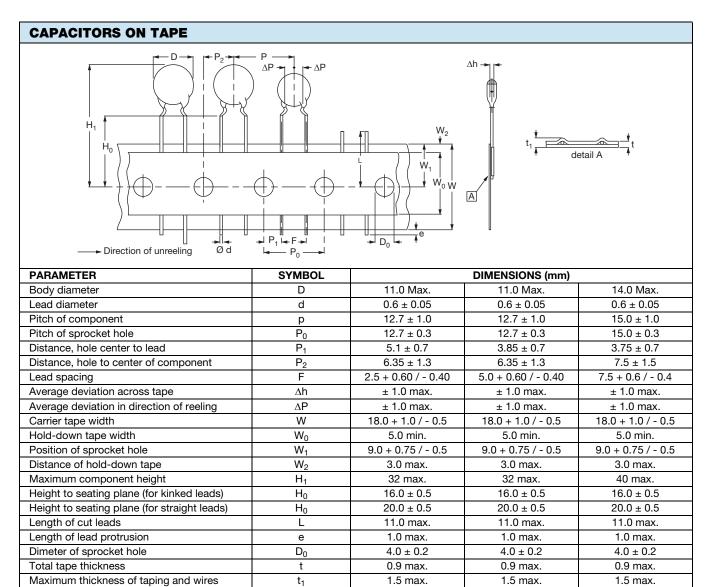




PACKAGING QUANTITIES AND BOX DIMENSIONS						
PACKAGING	SIZE CODE	LEAD SPACING (mm)	RATED VOLTAGE	SMALLEST PACKAGING QUANTITY (SPQ)	BOX DIMENSIONS L x W x H (mm)	
Tape on reel	≤ 47	≤ 6.4	< 500	2500	370 x 370 x 60	
		> 6.4	500	2000		
	> 47	All	All	1000		
Ammopack	≤ 47	≤ 6.4	≤ 500	2000	335 x 240 x 50	
		> 6.4		1500	335 x 290 x 50	
	> 47	> 6.4		1000		
Bulk (1)	< 49	All	All	1000	245 x 120 x 65	
	≥ 49	All	All	500		

#### Note

<sup>(1)</sup> SPQ contains one or a multiple of poly-bags, 1000 units per bag.



RELATED DOCUMENTS	
eneral Information <u>www.vishay.com/doc?28536</u>	



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**Authorized Distributor** 

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## Vishay:

```
        D330J20C0GH63L6
        D220J20C0GH63L6
        D202K39X5FL63L6
        D272K33Y5PL63L6R
        D103K69Y5PL63L0

        D100J20C0GH63L6R
        D100J20C0GL63L6
        D100J20C0GL63L6R
        D101G29C0GH63J5R
        D101J25U2MHAAAC

        D102K39Z5FNAAEM
        D103Z25Z5VH63L6
        D103Z29Z5UH6TJ6R
        D150J20C0GL6TJ5R
        D150J20U2MHAAAC

        D180J20C0GH63L6R
        D203Z59Z5UL63L0R
        D220J20C0GH63L6R
        D270J20SL0L6TJ6R
        D271K20Y5PH63L6R

        D330J20C0GH63L6R
        D470J25C0GH63L6R
        D561K20Y5PH63J5R
        D101G29C0GH6UJ5R
        D150J20C0GH63L6R

        D101K20Y5PL63L6
        D100J20C0GL63J5R
        D470G25C0GH6UJ5R
        D560G25C0GH6TJ5R
        D220J25C0GL63L6R

        D270J25C0GL6UJ5R
        D470J25C0GH6TJ5R
        D470J25C0GH63J5R
        D103Z31Y5VHAAEU
        D271K20Y5PL63L6R

        D101J29C0GH63J5R
        D392K29Y5PH63J5R
        D272K25Y5PH63J5R
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        D472K43Y5PL6UJ5R
        D330G25U2JL6UJ5R
        D222K33Y5PL6UJ5R
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        D223Z29Z5VF6UJ5R

        D103M
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