

#### 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:

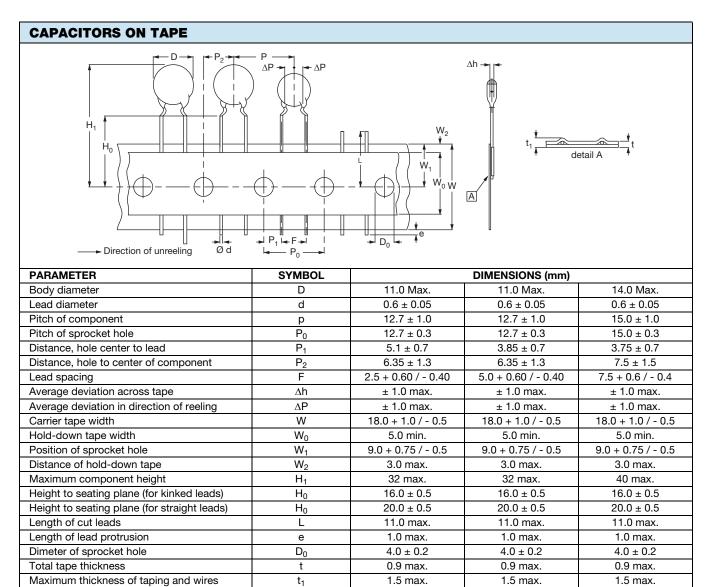




PACKAGING QUANTITIES AND BOX DIMENSIONS					
PACKAGING	SIZE CODE	LEAD SPACING (mm)	RATED VOLTAGE	SMALLEST PACKAGING QUANTITY (SPQ)	BOX DIMENSIONS L x W x H (mm)
Tape on reel	≤ 47	≤ 6.4	< 500	2500	370 x 370 x 60
		> 6.4	500	2000	
	> 47	All	All	1000	
Ammopack	≤ 47	≤ 6.4	≤ 500	2000	335 x 240 x 50
		> 6.4		1500	335 x 290 x 50
	> 47	> 6.4		1000	333 X 290 X 30
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	
General Information	www.vishay.com/doc?28536



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# Vishay:

D101K20Y5PL63L6F	D102K25Y5PL6TJ6F	D103M43Z5UL63L6F	R D103Z25Z5VH63L6F	D221K20X5FL63L6R
D222K39X5FL63L6R	D331K20Y5PL63L6R	D471K20Y5PL63L6R	D471K25X5FL63L6R	D472K33Y5PH63L2R
D681K25X5FL63L6R	D102K29X5FL6TL6R	D681K25X5FL6TL6R	D103M29Z5UH6UJ5R	D472M33Z5UL6UJ5R
D471K20Y5PH6UJ5R	D331K20Y5PL6TJ5R	D103K69Y5PL63L0R	D102K29X5FL63L6R	D680J25SL0L6UJ5R
D221G39U2JH63J5R	D102K20Y5PH63J5R	D681K20Y5PH63J5R	D332K29Y5PH63L2R	D103K43Y5PH63L2R
D221G39U2JH63L2R	D472K33Y5PH63J5R	D681K20Y5PH63L2R	D103K43Y5PH6TJ5R	D271G39U2JH63L2R
D221K20Y5PL63L6R	D271G39U2JH63J5R	D471K20Y5PH63L2R	D181G39U2JH63J5R	D102K25Y5PL63L6R
D222K25Y5PH63J5R	D181G39U2JH63L2R	D152K25Y5PH63J5R	D102K20Y5PH63L2R	D222K25Y5PH63L2R
D331G47U2JH63L2R	D152K25Y5PH63L2R	D331G47U2JH63J5R	D150G20U2JL6TJ5R	D153M53Z5UL63J7R
D101K20Y5PL6TJ5R	D471K20Y5PH63J5R	D101K20Y5PL6UJ5R	D102K25Y5PL6UJ5R	D101K20Y5PL6UL6R