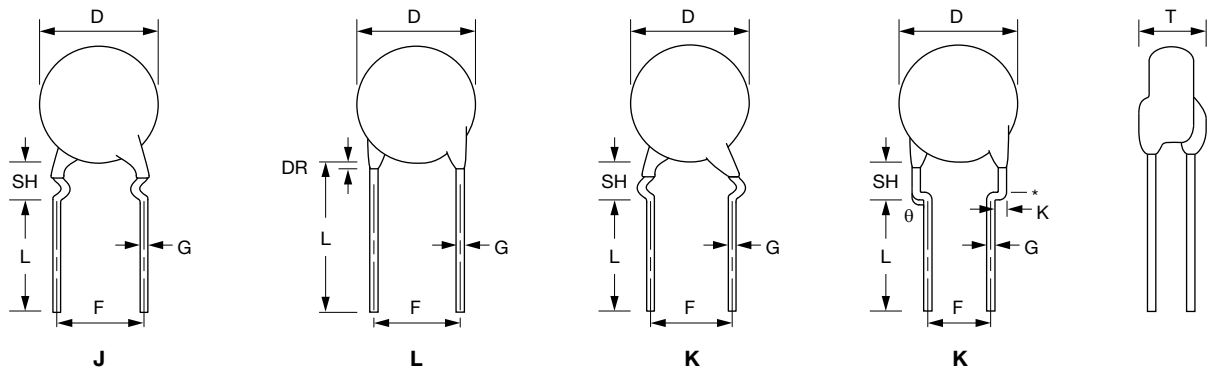
LEAD CONFIGURATION (in millimeters)

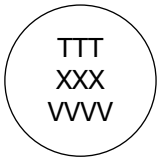


Note

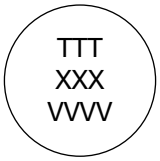
- Lead-spacing 2.5 mm is available for L lead configuration only.

MARKING

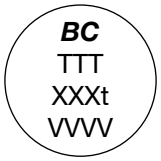
Size 20



Size 25



Size 29 and above



Note

- Refer to specified part for detail marking.

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	C = ± 0.25 pF G = ± 2 % J = ± 5 % K = ± 10 % M = ± 20 % Z = +80 % / -20 %	Please refer to relevant datasheet	Please refer to relevant datasheet	F = 50 V_{DC} H = 100 V_{DC} L = 500 V_{DC}	6 = 0.60 mm ± 0.05 mm	3 = bulk T = tape and reel U = ammo	Please refer to relevant datasheet	2 = 2.5 mm 5 = 5.0 mm 6 = 6.4 mm 7 = 7.5 mm	

ORDERING CODES

DIELECTRIC SL0 (50 V_{DC} / 100 V_{DC})						
CAP. (pF)	50 V_{DC}			100 V_{DC}		
	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 SL0 (500 V_{DC})			
CAP. (pF)	500 V_{DC}		
	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)

DIELECTRIC N750						
CAP. (pF)	100 V_{DC}			500 V_{DC}		
	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	/	/	/

Notes

- 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)

DIELECTRIC Y5P (50 V_{DC} / 100 V_{DC})						
CAP. (pF)	50 V_{DC}			100 V_{DC}		
	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 (500 V_{DC})			
CAP. (pF)	500 V_{DC}		
	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

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 Z5U (50 V_{DC} / 100 V_{DC})						
CAP. (pF)	**50 V_{DC}**			**100 V_{DC}**		
	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_{DC})			
CAP. (pF)	**500 V_{DC}**		
	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

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)

DIELECTRIC Y5V (50 V_{DC} / 100 V_{DC})						
CAP. (pF)	50 V_{DC}			100 V_{DC}		
	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_{DC})			
CAP. (pF)	500 V_{DC}		
	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)

DIELECTRIC Z5V						
CAP. (pF)	50 V_{DC}			100 V_{DC}		
	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

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)

DIELECTRIC X5F			
CAP. (pF)	500 V_{DC}		
	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_{DC}		
	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:

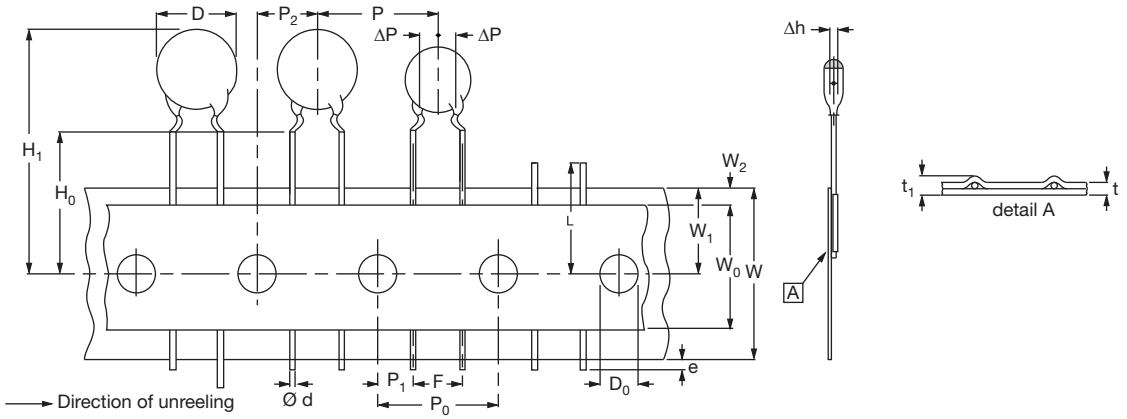
PACKAGING QUANTITIES AND BOX DIMENSIONS

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

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

CAPACITORS ON TAPE



PARAMETER	SYMBOL	DIMENSIONS (mm)		
Body diameter	D	11.0 Max.	11.0 Max.	14.0 Max.
Lead diameter	d	0.6 ± 0.05	0.6 ± 0.05	0.6 ± 0.05
Pitch of component	p	12.7 ± 1.0	12.7 ± 1.0	15.0 ± 1.0
Pitch of sprocket hole	P_0	12.7 ± 0.3	12.7 ± 0.3	15.0 ± 0.3
Distance, hole center to lead	P_1	5.1 ± 0.7	3.85 ± 0.7	3.75 ± 0.7
Distance, hole to center of component	P_2	6.35 ± 1.3	6.35 ± 1.3	7.5 ± 1.5
Lead spacing	F	2.5 + 0.60 / - 0.40	5.0 + 0.60 / - 0.40	7.5 + 0.6 / - 0.4
Average deviation across tape	Δh	± 1.0 max.	± 1.0 max.	± 1.0 max.
Average deviation in direction of reeling	ΔP	± 1.0 max.	± 1.0 max.	± 1.0 max.
Carrier tape width	W	18.0 + 1.0 / - 0.5	18.0 + 1.0 / - 0.5	18.0 + 1.0 / - 0.5
Hold-down tape width	W_0	5.0 min.	5.0 min.	5.0 min.
Position of sprocket hole	W_1	9.0 + 0.75 / - 0.5	9.0 + 0.75 / - 0.5	9.0 + 0.75 / - 0.5
Distance of hold-down tape	W_2	3.0 max.	3.0 max.	3.0 max.
Maximum component height	H_1	32 max.	32 max.	40 max.
Height to seating plane (for kinked leads)	H_0	16.0 ± 0.5	16.0 ± 0.5	16.0 ± 0.5
Height to seating plane (for straight leads)	H_0	20.0 ± 0.5	20.0 ± 0.5	20.0 ± 0.5
Length of cut leads	L	11.0 max.	11.0 max.	11.0 max.
Length of lead protrusion	e	1.0 max.	1.0 max.	1.0 max.
Dimeter of sprocket hole	D_0	4.0 ± 0.2	4.0 ± 0.2	4.0 ± 0.2
Total tape thickness	t	0.9 max.	0.9 max.	0.9 max.
Maximum thickness of taping and wires	t_1	1.5 max.	1.5 max.	1.5 max.

RELATED DOCUMENTS

General Information	www.vishay.com/doc?28536

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