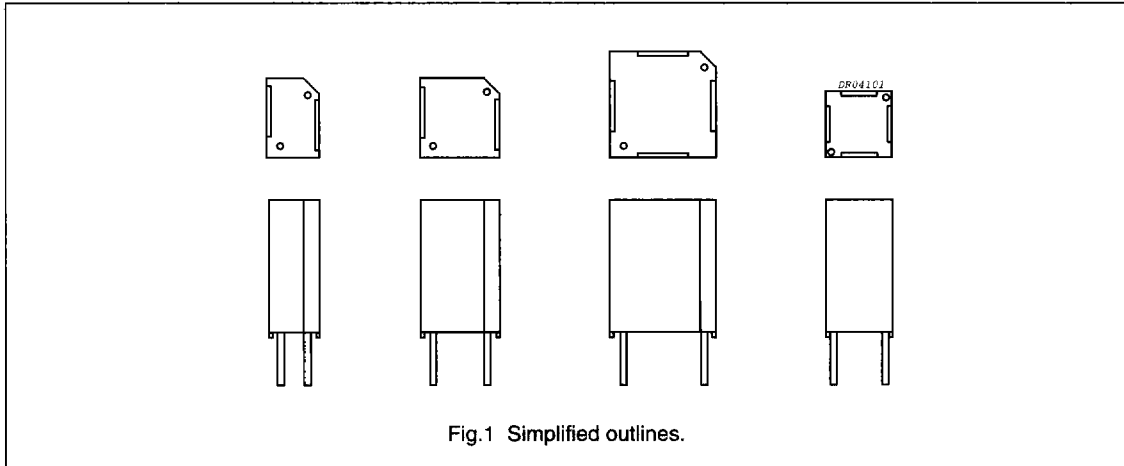


# Polystyrene film foil capacitors

KS 443

## KS RADIAL POTTED CAPACITORS



### FEATURES

- 2.54 to 7.62 mm lead pitch
- Supplied loose and taped on reel
- The dimensions are such that, in combination with currently available ferrites, a high package density is possible.

### APPLICATIONS

- In LC filters, particularly in telephony equipment, where high requirements are imposed on precision, stability, resistance to humidity, dissipation factor and reliability.

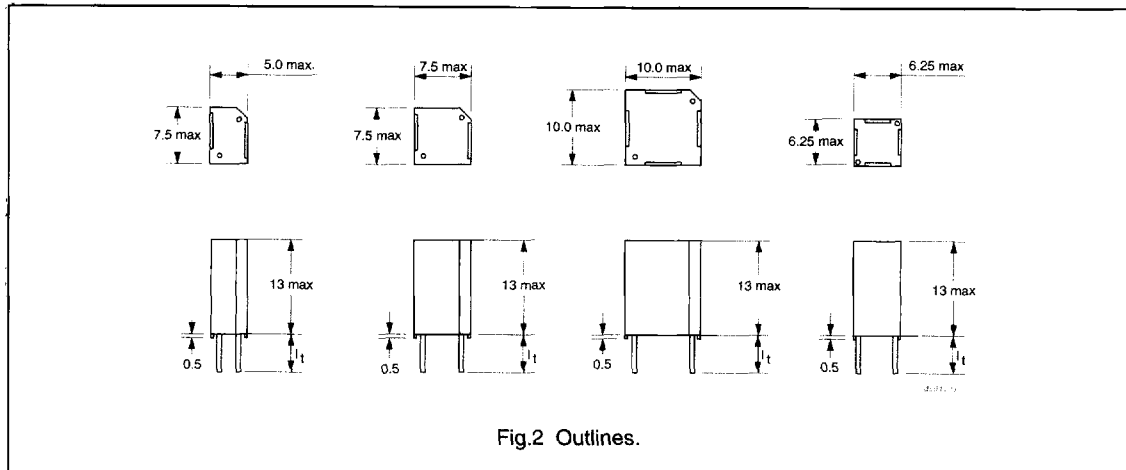
### QUICK REFERENCE DATA

DESCRIPTION	VALUE
Capacitance range (E96 series)	100 to 34 000 pF
Capacitance tolerance	±1%
Rated voltage (DC)	63 V
Climatic category	55/070/56 (class 1) 55/085/56 (class 3)
Rated temperature	70 °C (class 1) 85 °C (class 3)
Reference specification	IEC 384-7
Stability class	Class 1 and 3

Polystyrene film foil capacitors

KS 443

KS 443 GENERAL DATA



Specific reference data for the 63 V DC capacitors

DESCRIPTION	VALUE		
	at 1 kHz	at 100 kHz	at 1 MHz
Tangent of loss angle:			
C ≤ 500 pF	≤5 × 10 <sup>-4</sup>	—	≤10 × 10 <sup>-4</sup>
500 pF < C ≤ 1000 pF	≤5 × 10 <sup>-4</sup>	—	≤15 × 10 <sup>-4</sup>
1000 pF < C ≤ 10000 pF	≤5 × 10 <sup>-4</sup>	≤10 × 10 <sup>-4</sup>	—
10000 pF < C ≤ 15000 pF	≤5 × 10 <sup>-4</sup>	≤15 × 10 <sup>-4</sup>	—
15000 pF < C ≤ 20000 pF	≤5 × 10 <sup>-4</sup>	≤25 × 10 <sup>-4</sup>	—
20000 pF < C ≤ 30000 pF	≤5 × 10 <sup>-4</sup>	≤40 × 10 <sup>-4</sup>	—
C > 30000 pF	≤5 × 10 <sup>-4</sup>	≤60 × 10 <sup>-4</sup>	—
R between leads	>500000 MΩ		
R between interconnected leads	>500000 MΩ		

Available versions

loose (taped versions on request)

C (E96) (pF)	DIMENSIONS b × h × l (mm)	SPQ	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....		ORDERING
			LOOSE IN BOX		
			l <sub>t</sub> = 3.0 +0.4/-0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm	
100 to 3920	5.0 × 13.0 × 7.5	200	—	41001 to 43922	on request
4120 to 15000	7.5 × 13.0 × 7.5	200	—	44122 to 41503	on request
15400 to 34000	10.0 × 13.0 × 10.0	100	—	41543 to 43403	on request
100 to 3920	5.0 × 13.0 × 7.5	200	61001 to 63922	—	on request
100 to 3920	6.25 × 13.0 × 6.25	200	—	31001 to 33922	on request
100 to 3920	7.5 × 13.0 × 7.5	200	71001 to 73922	81001 to 83922	on request
4120 to 7500	6.25 × 13.0 × 6.25	200	—	34122 to 37502	on request
4120 to 15000	7.5 × 13.0 × 7.5	200	64122 to 61503	—	on request
15400 to 34000	10.0 × 13.0 × 10.0	100	61543 to 63403	—	on request

## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}$ ;  $U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....				
	LOOSE IN BOX				
	b × l = 5.0 × 7.5 mm		b × l = 7.5 × 7.5 mm		b × l = 6.25 × 6.25 mm
	$I_1 = 3.0$ +0.4/-0 mm	$I_1 = 5.0$ +0/-1.0 mm	$I_1 = 3.0$ +0.4/-0 mm	$I_1 = 5.0$ +0/-1.0 mm	$I_1 = 5.0$ +0/-1.0 mm
100	61001	41001	71001	81001	31001
102	61021	41021	71021	81021	31021
105	61051	41051	71051	81051	31051
107	61071	41071	71071	81071	31071
110	61101	41101	71101	81101	31101
113	61131	41131	71131	81131	31131
115	61151	41151	71151	81151	31151
118	61181	41181	71181	81181	31181
121	61211	41211	71211	81211	31211
124	61241	41241	71241	81241	31241
127	61271	41271	71271	81271	31271
130	61301	41301	71301	81301	31301
133	61331	41331	71331	81331	31331
137	61371	41371	71371	81371	31371
140	61401	41401	71401	81401	31401
143	61431	41431	71431	81431	31431
147	61471	41471	71471	81471	31471
150	61501	41501	71501	81501	31501
154	61541	41541	71541	81541	31541
158	61581	41581	71581	81581	31581
162	61621	41621	71621	81621	31621
165	61651	41651	71651	81651	31651
169	61691	41691	71691	81691	31691
174	61741	41741	71741	81741	31741
178	61781	41781	71781	81781	31781
182	61821	41821	71821	81821	31821
187	61871	41871	71871	81871	31871
191	61911	41911	71911	81911	31911
196	61961	41961	71961	81961	31961
200	62001	42001	72001	82001	32001
205	62051	42051	72051	82051	32051
210	62101	42101	72101	82101	32101
215	62151	42151	72151	82151	32151
221	62211	42211	72211	82211	32211
226	62261	42261	72261	82261	32261
232	62321	42321	72321	82321	32321
237	62371	42371	72371	82371	32371

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.

## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}$ ;  $U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....				
	LOOSE IN BOX				
	b × l = 5.0 × 7.5 mm		b × l = 7.5 × 7.5 mm		b × l = 6.25 × 6.25 mm
	l <sub>t</sub> = 3.0 +0.4/-0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm	l <sub>t</sub> = 3.0 +0.4/-0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm
243	62431	42431	72431	82431	32431
249	62491	42491	72491	82491	32491
255	62551	42551	72551	82551	32551
261	62611	42611	72611	82611	32611
267	62671	42671	72671	82671	32671
274	62741	42741	72741	82741	32741
280	62801	42801	72801	82801	32801
287	62871	42871	72871	82871	32871
294	62941	42941	72941	82941	32941
301	63011	43011	73011	83011	33011
309	63091	43091	73091	83091	33091
316	63161	43161	73161	83161	33161
324	63241	43241	73241	83241	33241
332	63321	43321	73321	83321	33321
340	63401	43401	73401	83401	33401
348	63481	43481	73481	83481	33481
357	63571	43571	73571	83571	33571
365	63651	43651	73651	83651	33651
374	63741	43741	73741	83741	33741
383	63831	43831	73831	83831	33831
392	63921	43921	73921	83921	33921
402	64021	44021	74021	84021	34021
412	64121	44121	74121	84121	34121
422	64221	44221	74221	84221	34221
432	64321	44321	74321	84321	34321
442	64421	44421	74421	84421	34421
453	64531	44531	74531	84531	34531
464	64641	44641	74641	84641	34641
475	64751	44751	74751	84751	34751
487	64871	44871	74871	84871	34871
499	64991	44991	74991	84991	34991
511	65111	45111	75111	85111	35111
523	65231	45231	75231	85231	35231
536	65361	45361	75361	85361	35361
549	65491	45491	75491	85491	35491
562	65621	45621	75621	85621	35621
576	65761	45761	75761	85761	35761
590	65901	45901	75901	85901	35901

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.

## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}$ ;  $U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....				
	LOOSE IN BOX				
	b × l = 5.0 × 7.5 mm		b × l = 7.5 × 7.5 mm		b × l = 6.25 × 6.25 mm
	$l_t = 3.0$ +0.4/-0 mm	$l_t = 5.0$ +0/-1.0 mm	$l_t = 3.0$ +0.4/-0 mm	$l_t = 5.0$ +0/-1.0 mm	$l_t = 5.0$ +0/-1.0 mm
604	66041	46041	76041	86041	36041
619	66191	46191	76191	86191	36191
634	66341	46341	76341	86341	36341
649	66491	46491	76491	86491	36491
665	66651	46651	76651	86651	36651
681	66811	46811	76811	86811	36811
698	66981	46981	76981	86981	36981
715	67151	47151	77151	87151	37151
732	67321	47321	77321	87321	37321
750	67501	47501	77501	87501	37501
768	67681	47681	77681	87681	37681
787	67871	47871	77871	87871	37871
806	68061	48061	78061	88061	38061
825	68251	48251	78251	88251	38251
845	68451	48451	78451	88451	38451
866	68661	48661	78661	88661	38661
877	68771	48771	78771	88771	38771
909	69091	49091	79091	89091	39091
931	69311	49311	79311	89311	39311
953	69531	49531	79531	89531	39531
976	69761	49761	79761	89761	39761
1000	61002	41002	71002	81002	31002
1020	61022	41022	71022	81022	31022
1050	61052	41052	71052	81052	31052
1070	61072	41072	71072	81072	31072
1100	61102	41102	71102	81102	31102
1130	61132	41132	71132	81132	31132
1150	61152	41152	71152	81152	31152
1180	61182	41182	71182	81182	31182
1210	61212	41212	71212	81212	31212
1240	61242	41242	71242	81242	31242
1270	61272	41272	71272	81272	31272
1300	61302	41302	71302	81302	31302
1330	61332	41332	71332	81332	31332
1370	61372	41372	71372	81372	31372
1400	61402	41402	71402	81402	31402
1430	61432	41432	71432	81432	31432
1470	61472	41472	71472	81472	31472

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.

## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}$ ;  $U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....				
	LOOSE IN BOX				
	b × l = 5.0 × 7.5 mm		b × l = 7.5 × 7.5 mm		b × l = 6.25 × 6.25 mm
	$l_t = 3.0$ +0.4/-0 mm	$l_t = 5.0$ +0/-1.0 mm	$l_t = 3.0$ +0.4/-0 mm	$l_t = 5.0$ +0/-1.0 mm	$l_t = 5.0$ +0/-1.0 mm
1500	61502	41502	71502	81502	31502
1540	61542	41542	71542	81542	31542
1580	61582	41582	71582	81582	31582
1620	61622	41622	71622	81622	31622
1650	61652	41652	71652	81652	31652
1690	61692	41692	71692	81692	31692
1740	61742	41742	71742	81742	31742
1780	61782	41782	71782	81782	31782
1820	61822	41822	71822	81822	31822
1870	61872	41872	71872	81872	31872
1910	61912	41912	71912	81912	31912
1960	61962	41962	71962	81962	31962
2000	62002	42002	72002	82002	32002
2050	62052	42052	72052	82052	32052
2100	62102	42102	72102	82102	32102
2150	62152	42152	72152	82152	32152
2210	62212	42212	72212	82212	32212
2260	62262	42262	72262	82262	32262
2320	62322	42322	72322	82322	32322
2370	62372	42372	72372	82372	32372
2430	62432	42432	72432	82432	32432
2490	62492	42492	72492	82492	32492
2550	62552	42552	72552	82552	32552
2610	62612	42612	72612	82612	32612
2670	62672	42672	72672	82672	32672
2740	62742	42742	72742	82742	32742
2800	62802	42802	72802	82802	32802
2870	62872	42872	72872	82872	32872
2940	62942	42942	72942	82942	32942
3010	63012	43012	73012	83012	33012
3090	63092	43092	73092	83092	33092
3160	63162	43162	73162	83162	33162
3240	63242	43242	73242	83242	33242
3320	63322	43322	73322	83322	33322
3400	63402	43402	73402	83402	33402
3480	63482	43482	73482	83482	33482
3570	63572	43572	73572	83572	33572
3650	63652	43652	73652	83652	33652
3740	63742	43742	73742	83742	33742
3830	63832	43832	73832	83832	33832
3920	63922	43922	73922	83922	33922

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.

## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}; U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....		
	LOOSE IN BOX		
	b × l = 7.5 × 7.5 mm		b × l = 6.25 × 6.25 mm
	l <sub>t</sub> = 3.0 +0.4/-0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm
4 120	64122	44122	34122
4 220	64222	44222	34222
4 320	64322	44322	34322
4 420	64422	44422	34422
4 530	64532	44532	34532
4 640	64642	44642	34642
4 750	64752	44752	34752
4 870	64872	44872	34872
4 990	64992	44992	34992
5 110	65112	45112	35112
5 230	65232	45232	35232
5 360	65362	45362	35362
5 490	65492	45492	35492
5 620	65622	45622	35622
5 760	65762	45762	35762
5 900	65902	45902	35902
6 040	66042	46042	36042
6 190	66192	46192	36192
6 340	66342	46342	36342
6 490	66492	46492	36492
6 650	66652	46652	36652
6 810	66812	46812	36812
6 980	66982	46982	36982
7 150	67152	47152	37152
7 320	67322	47322	37322
7 500	67502	47502	37502
7 680	67682	47682	-
7 870	67872	47872	-
8 060	68062	48062	-
8 250	68252	48252	-
8 450	68452	48452	-
8 660	68662	48662	-
8 870	68872	48872	-
9 090	69092	49092	-
9 310	69312	49312	-
9 530	69532	49532	-
9 760	69762	49762	-
10 000	61003	41003	-

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.

## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}$ ;  $U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....		
	LOOSE IN BOX		
	b × l = 7.5 × 7.5 mm		b × l = 6.25 × 6.25 mm
	l <sub>t</sub> = 3.0 +0.4/-0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm	l <sub>t</sub> = 5.0 +0/-1.0 mm
10200	61023	41023	–
10500	61053	41053	–
10700	61073	41073	–
11000	61103	41103	–
11300	61133	41133	–
11500	61153	41153	–
11800	61183	41183	–
12100	61213	41213	–
12400	61243	41243	–
12700	61273	41273	–
13000	61303	41303	–

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.



## Polystyrene film foil capacitors

KS 443

 $U_{Rdc} = 63 \text{ V}$ ;  $U_{Rac} = 25 \text{ V}$ 

loose

C <sup>(1)</sup> (E96) (pF)	LAST 5 DIGITS OF CATALOGUE NUMBER 2222 443 .....			
	LOOSE IN BOX			
	b × l = 7.5 × 7.5 mm		b × l = 10.0 × 10.0 mm	
	$l_t = 3.0 +0.4/-0 \text{ mm}$	$l_t = 5.0 +0/-1.0 \text{ mm}$	$l_t = 3.0 +0.4/-0 \text{ mm}$	$l_t = 5.0 +0/-1.0 \text{ mm}$
13300	61333	41333	-	-
13700	61373	41373	-	-
14000	61403	41403	-	-
14300	61433	41433	-	-
14700	61473	41473	-	-
15000	61503	41503	-	-
15400	-	-	61543	41543
15800	-	-	61583	41583
16200	-	-	61623	41623
16500	-	-	61653	41653
16900	-	-	61693	41693
17400	-	-	61743	41743
17800	-	-	61783	41783
18200	-	-	61823	41823
18700	-	-	61873	41873
19100	-	-	61913	41913
20000	-	-	62003	42003
21000	-	-	62103	42103
21500	-	-	62153	42153
22100	-	-	62213	42213
22600	-	-	62263	42263
23200	-	-	62323	42323
23700	-	-	62373	42373
24300	-	-	62433	42433
24900	-	-	62493	42493
25500	-	-	62553	42553
26100	-	-	62613	42613
27400	-	-	62743	42743
28000	-	-	62803	42803
28700	-	-	62873	42873
29400	-	-	62943	42943
30100	-	-	63013	43013
30900	-	-	63093	43093
31600	-	-	63163	43163
32400	-	-	63243	43243
33200	-	-	63323	43323
34000	-	-	63403	43403

**Note**

- In addition to the values of the E96 series as quoted, intermediate values of the E192 series are available with a tolerance  $\pm 1\%$ . The specifications of these intermediate values are equal to the specifications of the next higher value of the E96 series.

## Polystyrene film foil capacitors

KS 443

**MARKING****Product marking**

CAPACITORS WITH DIMENSIONS 5.0 × 7.5 mm AND  
6.25 × 6.25 mm

The capacitors are marked on the top in black ink with the following information:

1. Rated capacitance code in accordance with "IEC 62"
2. Tolerance on rated capacitance: F = ±1%
3. Rated voltage (DC) (e.g. 63 V)
4. Production date code in accordance with "IEC 62, clause 5"
5. Code for dielectric material (KS).

The earth side is indicated by a vertical line to the left of the 2<sup>nd</sup> and 3<sup>rd</sup> lines of marking, or by the bevelled corner if applicable.

CAPACITORS WITH DIMENSIONS 7.5 × 7.5 mm AND  
10 × 10 mm

The capacitors are marked on the top in black ink with the following information:

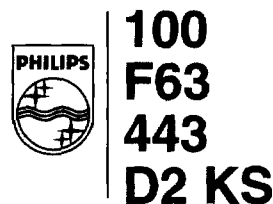
1. Rated capacitance code in accordance with "IEC 62"
2. Tolerance on rated capacitance: F = ±1%
3. Rated voltage (DC) (e.g. 63 V)
4. Code for dielectric material (KS)
5. Manufacturer's type designation (443)
6. Production date code in accordance with "IEC 62, clause 5"
7. Manufacturer's identification symbol.

The earth side is indicated by a vertical line to the left of the 2<sup>nd</sup> and 3<sup>rd</sup> lines of marking, or by the bevelled corner.



100  
F63  
D2 KS

Fig.3 Example of marking for capacitors with dimensions 5.0 × 7.5 mm and 6.25 × 6.25 mm.



PHILIPS  
100  
F63  
443  
D2 KS





Fig.4 Example of marking for capacitors with dimensions 7.5 × 7.5 mm and 10 × 10 mm.

## Polystyrene film foil capacitors

KS 443

## Package marking

The package containing the capacitors is marked as shown in Fig.5.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	<p><b>PHILIPS COMPONENTS</b>  <b>MADE IN BELGIUM</b>  <b>POLYSTYRENE FILM-FOIL CAPACITOR</b>  <b>KS RADIAL POTTED TYPE</b>  <b>100pF ±1% 63V= 55/085/56</b></p> <p> WO: 12345678</p> <p><b>ORIG A170 RPC HQ</b></p> <p></p> <p><b>TYPE KS 443</b></p> <hr/> <p> <b>QTY 200 DATE 9626</b></p> <p> <b>CODENO 2222 443 41001</b></p>	<p><b>Barcode label marking</b></p> <table border="1"> <thead> <tr> <th>LINE</th> <th>MARKING EXPLANATION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Manufacturer's name</td> </tr> <tr> <td>2</td> <td>Country of origin</td> </tr> <tr> <td>3</td> <td>Sub-family</td> </tr> <tr> <td>4</td> <td>Type description</td> </tr> <tr> <td>5</td> <td>Capacitance value, tolerance, voltage and climatic category ("IEC 68-1")</td> </tr> <tr> <td>6</td> <td>-</td> </tr> <tr> <td>7</td> <td>Preference origin code: A Country of origin in code: 170 (Belgium) Responsible production centre: HQ Work order: WO</td> </tr> <tr> <td>8</td> <td>Product type description</td> </tr> <tr> <td>9</td> <td>Quantity and production period, year and week code</td> </tr> <tr> <td>10</td> <td>Product code (12NC)</td> </tr> </tbody> </table>	LINE	MARKING EXPLANATION	1	Manufacturer's name	2	Country of origin	3	Sub-family	4	Type description	5	Capacitance value, tolerance, voltage and climatic category ("IEC 68-1")	6	-	7	Preference origin code: A Country of origin in code: 170 (Belgium) Responsible production centre: HQ Work order: WO	8	Product type description	9	Quantity and production period, year and week code	10	Product code (12NC)
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Fig.5 Barcode label.