

CAPACITORS, CERAMIC, TYPE II, MULTIPLE LAYERS, BASED ON TYPES CNC 31 to 34, LEAD TYPES NE, PE, LE AND PLE				315F
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 3001 Detail ESCC 3001/037	Exxelia Technologies Chanteloup en Brie France	Qualification	CNES	Nov 2011
Remarks				
<p>Qualified Range:</p> <p>Variants 01 to 16. 16V : 2.2 to 68 μF 25V: 1.2 to 39 μF</p> <p>E12 \pm10% tolerance</p> <p>DIL format with equal number of leads per side Lead material : type A with type 10 finish (electro-deposited 98% Ag min.)</p> <p>Operating Temperature Range ($^{\circ}$C): -55 to +125</p>				

CAPACITORS, CERAMIC, TYPE II, 50V to 500V, BASED ON TYPES CNC53 to CNC56.				306F
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 3001	Exxelia Technologies Chanteloup en Brie France	Qualification	CNES	Mar 2011
Detail ESCC 3001/038		Remarks:		
<p>Qualified Range:</p> <p>Variants 01 to 04, 08 to 11, 15 to 18 and 22 to 25 are qualified All values 50V to 500V E12: ±10% tolerance</p> <p>Operating Temperature Range (°C): -55 to +125</p>				

CAPACITORS, CERAMIC, FIXED, CHIP, TYPE I					323E		
Procurement Specifications	Manufacturer		Nature of Approval	Supervising Authority	Initial Qualification Date		
Generic ESCC 3009 Detail ESCC	ExxeliaTechnologies Chanteloup en Brie France		Qualification	CNES	Oct 2012		
Remarks:							
3009/003, 3009/004, 3009/005, 3009/006, 3009/022, 3009/037, 3009/040, 3009/042							
Qualified range:							
Style	Model	Detail Spec	Variants	Capacitance Range		Rated Voltage	Tolerance (+%)
0805	CEC202S	3009/003	06	1	to 2 700	16	<10pF 0.25—0.5 – 1 (pF) ≥10pF 1, 2, 5, 10
	CEC204S	3009/040	02	1	to 2 200	25	
				1	to 1 800	50	
				1	to 1 200	100	
1210	CEC402S	3009/004	06	10	to 15 000	16	
	CEC404S	3009/040	04	10	to 12 000	25	
				10	to 12 000	50	
				10	To 6 800	100	
1812	CEC602S	3009/005	06	100	to 33 000	16	
	CEC604S	3009/040	05	100	to 27 000	25	
				100	to 22 000	50	
				100	to 12 000	100	
2220	CEC702S	3009/006	06	470	to 68 000	16	
	CEC704S	3009/040	06	470	to 56 000	25	
				470	to 47 000	50	
				470	to 27 000	100	
1206	CEC1202S	3009/022	06	1	to 6 800	16	
	CEC1204S	3009/040	03	1	to 5 600	25	
				1	to 5 600	50	
				1	to 3 900	100	
0603	CEC1402S	3009/037	06	1	to 1 000	16	
	CEC1404S	3009/040	01	1	to 680	25	
				1	to 560	50	
				1	to 330	100	
0402	CEC1902S	3009/042	06	1	to 330	10	
	CEC1904S	3009/040	13	1	to 120	16	
				1	to 100	25	
				1	to 82	50	
Operating Temp. Range (°C), -55 to +125							

CAPACITORS, CERAMIC, FIXED, CHIP, TYPE II							324E	
Procurement Specifications	Manufacturer		Nature of Approval	Supervising Authority		Initial Qualification Date		
Generic ESCC 3009 Detail ESCC	ExxeliaTechnologies Chanteloup en Brie France		Qualification	CNES		Oct 2012		
3009/008, 3009/009, 3009/010, 3009/011, 3009/023, 3009/038, 3009/039, 3009/043								
Qualified range:								
Style	Model	Detail Spec	Variants	Capacitance Range			Rated Voltage	Tolerance (+%)
0805	CNC202S	3009/008	06	1 000	to	150 000	16	5, 10, 20
				1 000	to	100 000	25	
				1 000	to	47 000	50	
				1 000	to	10 000	100	
			07	1 000	to	390 000	16	5, 10, 20
				1 000	to	150 000	25	
				1 000	to	100 000	50	
				1 000	to	47 000	100	
0805	CNC204S	3009/039	02	1 000	to	150 000	16	5, 10, 20
				1 000	to	100 000	25	
				1 000	to	47 000	50	
				1 000	to	10 000	100	
			14	1 000	to	390 000	16	5, 10, 20
				1 000	to	150 000	25	
				1 000	to	100 000	50	
				1 000	to	47 000	100	
1210	CNC402S	3009/009	06	2 200	to	560 000	16	5, 10, 20
				2 200	to	390 000	25	
				2 200	to	220 000	50	
				2 200	to	56 000	100	
			07	2 200	to	820 000	16	5, 10, 20
				2 200	to	560 000	25	
				2 200	to	390 000	50	
				2 200	to	220 000	100	
	CNC404S	3009/039	04	2 200	to	560 000	16	5, 10, 20
				2 200	to	390 000	25	
				2 200	to	220 000	50	
				2 200	to	56 000	100	
			16	2 200	to	820 000	16	5, 10, 20
				2 200	to	560 000	25	
				2 200	to	390 000	50	
				2 200	to	220 000	100	
1812	CNC602S	3009/010	06	3 900	to	1 200 000	16	5, 10, 20
				3 900	to	680 000	25	
				3 900	to	470 000	50	
				3 900	to	120 000	100	

CAPACITORS, CERAMIC, FIXED, CHIP, TYPE II							324E	
	CNC602S	3009/010	07	3 900 3 900 3 900 3 900	to to to to	1 800 000 1 200 000 820 000 470 000	16 25 50 100	5, 10, 20
	CNC604S	3009/039	05	3 900 3 900 3 900 3 900	to to to to	1 200 000 680 000 470 000 120 000	16 25 50 100	5, 10, 20
			17	3 900 3 900 3 900 3 900	to to to to	1 800 000 1 200 000 820 000 470 000	16 25 50 100	5, 10, 20
2220	CNC702S	3009/011	06	22 000 22 000 22 000 22 000	to to to to	2 700 000 1 500 000 1 000 000 270 000	16 25 50 100	5, 10, 20
			07	22 000 22 000 22 000 22 000	to to to to	3 900 000 2 200 000 1 800 000 1 000 000	16 25 50 100	5, 10, 20
	CNC704S	3009/039	06	22 000 22 000 22 000 22 000	to to to to	2 700 000 1 500 000 1 000 000 270 000	16 25 50 100	5, 10, 20
			18	22 000 22 000 22 000 22 000	to to to to	3 900 000 2 200 000 1 800 000 1 000 000	16 25 50 100	5, 10, 20
1206	CNC1202S	3009/023	06	1 800 1 800 1 800 1 800	to to to to	270 000 180 000 82 000 27 000	16 25 50 100	5, 10, 20
			07	1 800 1 800 1 800 1 800	to to to to	1 000 000 270 000 180 000 120 000	16 25 50 100	5, 10, 20
	CNC1204S	3009/039	03	1 800 1 800 1 800 1 800	to to to to	270 000 180 000 82 000 27 000	16 25 50 100	5, 10, 20
			15	1 800 1 800 1 800 1 800	to to to to	1 000 000 270 000 180 000 120 000	16 25 50 100	5, 10, 20
0603	CNC1402S	3009/038	06	270 270 270 270	to to to to	33 000 22 000 10 000 2 700	16 25 50 100	5, 10, 20
			07	270 270 270 270	to to to to	100 000 33 000 22 000 12 000	16 25 50 100	5, 10, 20
	CNC1404S	3009/039	01	270 270	to to	33 000 22 000	16 25	5, 10, 20

CAPACITORS, CERAMIC, FIXED, CHIP, TYPE II								324E	
				270	to	10 000	50		
				270	to	2 700	100		
			13	270	to	100 000	16	5, 10, 20	
				270	to	33 000	25		
				270	to	22 000	50		
				270	to	12 000	100		
0402	CNC1902S	3009/043	06	68	to	12 000	10	5, 10, 20	
				68	to	8 200	16		
				68	to	5 600	25		
				68	to	3 300	50		
	CNC1904S	3009/039	25	68	to	12 000	10	5, 10, 20	
				68	to	8 200	16		
				68	to	5 600	25		
				68	to	3 300	50		
Operating Temperature Range (°C), -55 to +125									

6.1.4 Fixed Film

CAPACITORS, FIXED, RECONSTITUTED MICA, HIGH VOLTAGE, BASED ON TYPE HT86PS AND HT97PS				251M																																																		
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date																																																		
Generic ESCC 3006	Exxelia Technologies Chanteloup en Brie France	Qualification	CNES	Aug 1998																																																		
Detail ESCC 3006/022 3006/027		Remarks:																																																				
Qualified Range:																																																						
Detail Spec 3006/022:																																																						
<table border="1"> <thead> <tr> <th colspan="3">Capacitance Range (nF)</th> <th>Tol. (±%)</th> <th>UR(kV)</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>to</td> <td>2 200</td> <td>10</td> <td>1.5</td> </tr> <tr> <td>15</td> <td>to</td> <td>1 500</td> <td>10</td> <td>2.5</td> </tr> <tr> <td>10</td> <td>to</td> <td>1 000</td> <td>10</td> <td>3.5</td> </tr> <tr> <td>4.7</td> <td>to</td> <td>470</td> <td>10</td> <td>5.0</td> </tr> <tr> <td>2.2</td> <td>to</td> <td>220</td> <td>10</td> <td>7.5</td> </tr> <tr> <td>0.1</td> <td>to</td> <td>100</td> <td>10</td> <td>10.0</td> </tr> <tr> <td>0.1</td> <td>to</td> <td>68</td> <td>10</td> <td>12.5</td> </tr> <tr> <td>0.1</td> <td>to</td> <td>33</td> <td>10</td> <td>15.0</td> </tr> <tr> <td>0.1</td> <td>to</td> <td>20</td> <td>10</td> <td>20.0</td> </tr> </tbody> </table>					Capacitance Range (nF)			Tol. (±%)	UR(kV)	22	to	2 200	10	1.5	15	to	1 500	10	2.5	10	to	1 000	10	3.5	4.7	to	470	10	5.0	2.2	to	220	10	7.5	0.1	to	100	10	10.0	0.1	to	68	10	12.5	0.1	to	33	10	15.0	0.1	to	20	10	20.0
Capacitance Range (nF)			Tol. (±%)	UR(kV)																																																		
22	to	2 200	10	1.5																																																		
15	to	1 500	10	2.5																																																		
10	to	1 000	10	3.5																																																		
4.7	to	470	10	5.0																																																		
2.2	to	220	10	7.5																																																		
0.1	to	100	10	10.0																																																		
0.1	to	68	10	12.5																																																		
0.1	to	33	10	15.0																																																		
0.1	to	20	10	20.0																																																		
Detail Spec 3006/027:																																																						
<table border="1"> <thead> <tr> <th colspan="3">Capacitance Range (nF)</th> <th>Tol. (±%)</th> <th>UR(kV)</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>to</td> <td>2 200</td> <td>10</td> <td>1.5</td> </tr> <tr> <td>15</td> <td>to</td> <td>1 500</td> <td>10</td> <td>2.5</td> </tr> <tr> <td>6.8</td> <td>to</td> <td>1 500</td> <td>10</td> <td>3.5</td> </tr> <tr> <td>3.3</td> <td>to</td> <td>680</td> <td>10</td> <td>5.0</td> </tr> <tr> <td>2.2</td> <td>to</td> <td>330</td> <td>10</td> <td>7.5</td> </tr> <tr> <td>1</td> <td>to</td> <td>150</td> <td>10</td> <td>10.0</td> </tr> <tr> <td>1</td> <td>to</td> <td>100</td> <td>10</td> <td>12.5</td> </tr> <tr> <td>1</td> <td>to</td> <td>68</td> <td>10</td> <td>15.0</td> </tr> <tr> <td>0.1</td> <td>to</td> <td>33</td> <td>10</td> <td>20.0</td> </tr> </tbody> </table>					Capacitance Range (nF)			Tol. (±%)	UR(kV)	22	to	2 200	10	1.5	15	to	1 500	10	2.5	6.8	to	1 500	10	3.5	3.3	to	680	10	5.0	2.2	to	330	10	7.5	1	to	150	10	10.0	1	to	100	10	12.5	1	to	68	10	15.0	0.1	to	33	10	20.0
Capacitance Range (nF)			Tol. (±%)	UR(kV)																																																		
22	to	2 200	10	1.5																																																		
15	to	1 500	10	2.5																																																		
6.8	to	1 500	10	3.5																																																		
3.3	to	680	10	5.0																																																		
2.2	to	330	10	7.5																																																		
1	to	150	10	10.0																																																		
1	to	100	10	12.5																																																		
1	to	68	10	15.0																																																		
0.1	to	33	10	20.0																																																		
Operating Temperature Range, (°C): -55 to +125																																																						

6.5 FILTERS (05)

6.5.1 Feedthrough

CAPACITORS FILTERS, C-TYPE, FEED THROUGH, HERMETICALLY SEALED (ONE END ONLY), BASED ON TYPE SFC030				375A
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 3008	EXXELIA Technologies Chanteloup en Brie France	Qualification	CNES	Sept 2021
Detail ESCC		Remarks The SFC filters were qualified and covered by certificate 252 (initial qualification date: August 1998). The certificate 252 was suspended in June 2020.		
3008/020				
<p>Qualified range:</p> <p>ESCC 3008/020: variants 01, 02, 04 and 05</p> <p>Operating Temperature Range (°C): -55 to +125</p>				