

TYPE 111

Hermetically sealed
in metal case

⚠ CAUTIONS

- This capacitor is polarized, do not apply reverse voltage.
- The sum of peak value of AC and DC voltage should not exceed the rated voltage.
- This catalog is designed for providing general information. Please inquire of our Sales Department to confirm specifications prior to use.

CHARACTERISTICS

ITEM	CHARACTERISTICS
Failure rate level	1%/1000h(Code M), 0.5%/1000h(Code N), 0.1%/1000h(Code P)
Operating temperature range	-55~+85°C to +125°C with voltage derating
Rated voltage	6.3-10-16-20-25-35-50-75-100VDC
Capacitance range	0.1~330 μF
Capacitance tolerance	±10%, ±20%

This products can manufacture the approved item by Japanese authorized organization.

Please inquire of our Sales Department for specification.

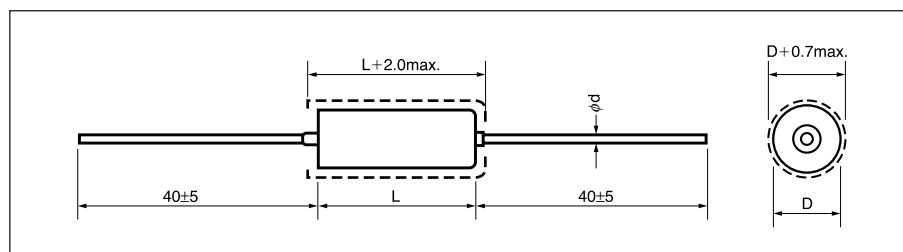
- MIL-C39003H
- NASDA-QTS-39003D/101 D

FEATURES

1. Type 111 is hermetically sealed capacitors in metal case, designed for excellent stability.
2. Available for package in tape.
3. This product is an approved item by the Self-Defence Agency of Japan and National Space Development Agency of Japan (NASDA) and meets following specification.
 - MIL-C39003H
 - NASDA-QTS-39003D/101D
 For further details, refer to our Sales Department.
4. Available for capacitance tolerance code "J"(±5%).

DIMENSIONS

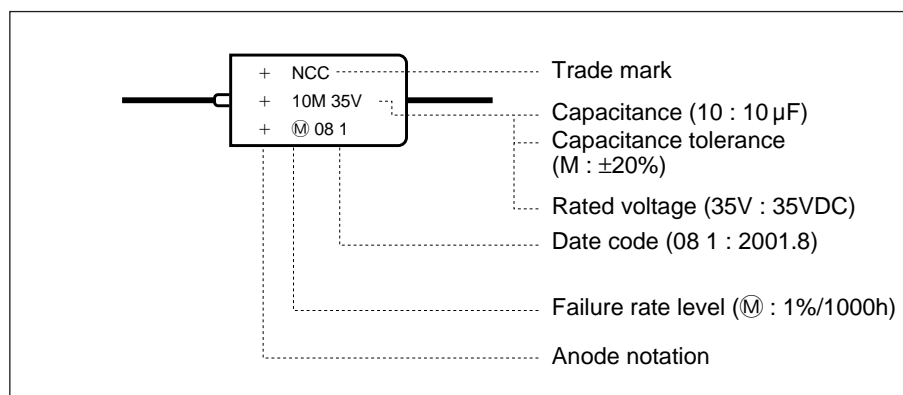
mm



CASE SIZE

Case code	D±0.5	L±1	d
A	3.15	6.3	0.5 ^{+0.1} / _{-0.025}
B	4.5	11.8	0.5 ^{+0.1} / _{-0.025}
C	7.1	16.0	0.65 ^{+0.12} / _{-0.03}
D	8.7	20.0	0.65 ^{+0.12} / _{-0.03}

MARKING





SOLID-ELECTROLYTE TANTALUM CAPACITORS

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STANDARD RATINGS

R.V.(VDC) Cap.(μF)	6.3	10	16	20	25	35	50	75	100
0.1						A	A	A	A
0.15						A	A	A	A
0.22						A	A	A	A
0.33						A	A	A	A
0.47						A	A	A	A
0.68						A	A	A	B
1.0						A	A	B	B
1.5					A	B	B	B	B
2.2				A		B	B	B	B
3.3			A			B	B	B	C
4.7		A				B	B	C	C
6.8	A					B	C	C	C
10					B	C	C	C	
15				B		C	C	D	
22			B			C	D		
33		B			C	D			
47	B			C		D			
68			C		D				
100		C		D					
150	C		D						
220		D							
330	D								

RATINGS AND CATALOG NUMBERS

	Catalog number	cap. (μF)	case code	Max DC Lct. (μA)			Max Dissipation factor			
				20°C	85°C	125°C	-55°C	20°C	85°C	125°C
Rated voltage 6.3VDC/Surge voltage 8VDC	111 □ ¹ 6301 685 □ ²	6.8	A	0.5	5	6.3	0.06	0.06	0.06	0.06
	111 □ ¹ 6301 476 □ ²	47	B	3.0	30	37	0.06	0.06	0.06	0.06
	111 □ ¹ 6301 157 □ ²	150	C	9.5	95	118	0.08	0.08	0.08	0.08
	111 □ ¹ 6301 337 □ ²	330	D	21	210	260	0.08	0.08	0.08	0.08
Rated voltage 10VDC/Surge voltage 13VDC	111 □ ¹ 1002 475 □ ²	4.7	A	0.5	5	6.3	0.04	0.04	0.04	0.05
	111 □ ¹ 1002 336 □ ²	33	B	3.3	33	41	0.06	0.06	0.06	0.06
	111 □ ¹ 1002 107 □ ²	100	C	10	100	125	0.08	0.08	0.08	0.08
	111 □ ¹ 1002 227 □ ²	220	D	22	220	275	0.08	0.08	0.08	0.08
Rated voltage 16VDC/Surge voltage 20VDC	111 □ ¹ 1602 335 □ ²	3.3	A	0.5	5	6.3	0.04	0.04	0.04	0.05
	111 □ ¹ 1602 226 □ ²	22	B	3.5	35	41	0.06	0.06	0.06	0.06
	111 □ ¹ 1602 686 □ ²	68	C	11	110	136	0.06	0.06	0.06	0.06
	111 □ ¹ 1602 157 □ ²	150	D	24	240	300	0.08	0.08	0.08	0.08
Rated voltage 20VDC/Surge voltage 25VDC	111 □ ¹ 2002 225 □ ²	2.2	A	0.5	5	6.3	0.04	0.04	0.04	0.05
	111 □ ¹ 2002 156 □ ²	15	B	3.0	30	38	0.06	0.06	0.06	0.06
	111 □ ¹ 2002 476 □ ²	47	C	9.4	94	118	0.06	0.06	0.06	0.06
	111 □ ¹ 2002 107 □ ²	100	D	20	200	250	0.08	0.08	0.08	0.08
Rated voltage 25VDC/Surge voltage 32VDC	111 □ ¹ 2502 155 □ ²	1.5	A	0.5	5	6.3	0.04	0.04	0.04	0.05
	111 □ ¹ 2502 106 □ ²	10	B	2.5	25	31	0.06	0.06	0.06	0.06
	111 □ ¹ 2502 336 □ ²	33	C	8.3	83	103	0.06	0.06	0.06	0.06
	111 □ ¹ 2502 686 □ ²	68	D	17	170	213	0.06	0.06	0.06	0.06

□¹ failure rate level code "M", "N" or "P".

□² capacitance tolerance code "K" (±10%) or "M" (±20%).





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	Catalog number	cap. (μ F)	case code	Max DC Lct. (μ A)			Max Dissipation factor				
				20°C	85°C	125°C	-55°C	20°C	85°C	125°C	
Rated voltage 35VDC/Surge voltage 44VDC	111 □ ¹ 3502 104 □ ²	0.1	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 154 □ ²	0.15	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 224 □ ²	0.22	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 334 □ ²	0.33	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 474 □ ²	0.47	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 684 □ ²	0.68	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 105 □ ²	1.0	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 155 □ ²	1.5	B	0.5	5	6.6	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 225 □ ²	2.2	B	0.8	8	9.6	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 335 □ ²	3.3	B	1.2	12	14	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 475 □ ²	4.7	B	1.6	16	21	0.04	0.04	0.04	0.05	
	111 □ ¹ 3502 685 □ ²	6.8	B	2.4	24	30	0.06	0.06	0.06	0.06	
	111 □ ¹ 3502 106 □ ²	10	C	3.5	35	44	0.06	0.06	0.06	0.06	
	111 □ ¹ 3502 156 □ ²	15	C	5.3	53	66	0.06	0.06	0.06	0.06	
	111 □ ¹ 3502 226 □ ²	22	C	7.7	77	96	0.06	0.06	0.06	0.06	
	111 □ ¹ 3502 336 □ ²	33	D	12	120	144	0.06	0.06	0.06	0.06	
111 □ ¹ 3502 476 □ ²	47	D	16	160	206	0.06	0.06	0.06	0.06		
Rated voltage 50VDC/Surge voltage 63VDC	111 □ ¹ 5002 104 □ ²	0.1	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 154 □ ²	0.15	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 224 □ ²	0.22	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 334 □ ²	0.33	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 474 □ ²	0.47	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 684 □ ²	0.68	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 105 □ ²	1.0	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 155 □ ²	1.5	B	0.8	8	9.4	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 225 □ ²	2.2	B	1.1	11	14	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 335 □ ²	3.3	B	1.7	17	21	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 475 □ ²	4.7	B	2.4	24	29	0.04	0.04	0.04	0.05	
	111 □ ¹ 5002 685 □ ²	6.8	C	3.4	34	43	0.06	0.06	0.06	0.06	
	111 □ ¹ 5002 106 □ ²	10	C	5.0	50	63	0.06	0.06	0.06	0.06	
	111 □ ¹ 5002 156 □ ²	15	C	7.5	75	94	0.06	0.06	0.06	0.06	
	111 □ ¹ 5002 226 □ ²	22	D	11	110	138	0.06	0.06	0.06	0.06	
	Rated voltage 75VDC/Surge voltage 98VDC	111 □ ¹ 7502 104 □ ²	0.1	A	0.5	5	6.3	0.04	0.04	0.04	0.05
111 □ ¹ 7502 154 □ ²		0.15	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 224 □ ²		0.22	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 334 □ ²		0.33	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 474 □ ²		0.47	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 684 □ ²		0.68	A	0.5	5	6.4	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 105 □ ²		1.0	B	0.8	8	9.4	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 155 □ ²		1.5	B	1.1	11	14	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 225 □ ²		2.2	B	1.7	17	21	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 335 □ ²		3.3	B	2.5	25	31	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 475 □ ²		4.7	C	3.5	35	44	0.04	0.04	0.04	0.05	
111 □ ¹ 7502 685 □ ²		6.8	C	5.1	51	64	0.06	0.06	0.06	0.06	
111 □ ¹ 7502 106 □ ²		10	C	7.5	75	94	0.06	0.06	0.06	0.06	
111 □ ¹ 7502 156 □ ²		15	D	11	110	141	0.06	0.06	0.06	0.06	
Rated voltage 100VDC/Surge voltage 125VDC		111 M 1003 104 □ ²	0.1	A	0.5	5	6.3	0.04	0.04	0.04	0.05
		111 M 1003 154 □ ²	0.15	A	0.5	5	6.3	0.04	0.04	0.04	0.05
	111 M 1003 224 □ ²	0.22	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 M 1003 334 □ ²	0.33	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 M 1003 474 □ ²	0.47	A	0.5	5	6.3	0.04	0.04	0.04	0.05	
	111 M 1003 684 □ ²	0.68	B	0.7	7	8.5	0.04	0.04	0.04	0.05	
	111 M 1003 105 □ ²	1.0	B	1.0	10	13	0.04	0.04	0.04	0.05	
	111 M 1003 155 □ ²	1.5	B	1.5	15	19	0.04	0.04	0.04	0.05	
	111 M 1003 225 □ ²	2.2	B	2.2	22	28	0.04	0.04	0.04	0.05	
	111 M 1003 335 □ ²	3.3	C	3.3	33	41	0.04	0.04	0.04	0.05	
	111 M 1003 475 □ ²	4.7	C	4.7	47	59	0.04	0.04	0.04	0.05	
	111 M 1003 685 □ ²	6.8	C	6.8	68	85	0.06	0.06	0.06	0.06	

□¹ failure rate level code "M", "N" or "P".
□² capacitance tolerance code "K" (\pm 10%)
or "M" (\pm 20%).

