CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

PCM Chip Type, Higher Capacitance High Temperature Range

For SMD | HR High Ripple Current | Z Low Impedance | F For High Frequency | L Long Life | Anti-Solvent Feature

TENTATIVE

- High reliability, Low ESR, High ripple current.
- Long life of 8000 hours at 125°C.
- SMD type : Lead free reflow soldering condition at 260°C peak complete correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- ESR after Endurance at -40°C.
- AEC-Q200 compliant. Please contact us for details.

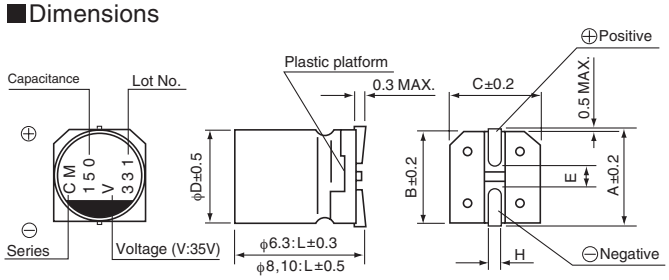
PCM ← Long Life Assurance → PCR

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +125°C
Rated Voltage Range	16 to 80V
Rated Capacitance Range	12 to 1000µF
Capacitance Tolerance	±20% at 120Hz, 20°C
Tangent of loss angle (tan δ)	Less than or equal to the specified value at 120Hz, 20°C
ESR (※1)	Less than or equal to the specified value at 100kHz, 20°C
Leakage Current (※2)	After 2 minutes' application of rated voltage, leakage current is not more than 0.03CV or 3(µA), whichever is greater.
Temperature Characteristics (Max.Impedance Ratio)	Z+125°C / Z+20°C ≦ 1.25 (100kHz) Z−55°C / Z+20°C ≦ 1.25
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 8000 hours (φD = 6.3:6000hours) at 125°C. Capacitance change: Within ± 20% of initial capacitance value (※3) tan δ: 150% or less of the initial specified value ESR (※1): 200% or less of the initial specified value Leakage current (※2): Less than or equal to the initial specified value
ESR after Endurance (※1)	Less than or equal to the specified value at 100kHz, -40°C
Damp Heat (Steady State)	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C, 85% RH. Capacitance change: Within ± 20% of initial capacitance value (※3) tan δ: 150% or less of the initial specified value ESR (※1): 200% or less of the initial specified value Leakage current (※2): Less than or equal to the initial specified value
Resistance to Soldering Heat	After soldering the capacitor under the soldering conditions prescribed here, the capacitor shall meet the specifications listed at right. Pre-heating shall be done at 150 to 200°C and for 60 to 180 sec. The duration for over +230°C temperature at capacitor surface shall not exceed 60 seconds. In case peak temperature is 260°C or less, reflow soldering shall be two times maximum. Measurement for solder temperature profile shall be made at the capacitor top. Capacitance change: Within ± 10% of the initial capacitance value (※3) tan δ: 130% or less than the initial specified value ESR (※1): 130% or less than the initial specified value Leakage current (※2): Less than or equal to the initial specified value
Marking	Navy blue print on the case top

※1 ESR should be measured at both of the terminal ends closest where the terminals protrude through the plastic platform.
※2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.
※3 Initial value : The value before test of examination of resistance to soldering.

■Dimensions



(mm)

Size	φ6.3×6L	φ6.3×8L	φ8×7L	φ8×10L	φ8×12L	φ10×8L	φ10×10L	φ10×12.7L
φD	6.3	6.3	8.0	8.0	8.0	10.0	10.0	10.0
L	5.9	7.9	6.9	9.9	11.9	7.9	9.9	12.6
A	7.3	7.3	9.0	9.0	9.0	11.0	11.0	11.0
B	6.6	6.6	8.3	8.3	8.3	10.3	10.3	10.3
C	6.6	6.6	8.3	8.3	8.3	10.3	10.3	10.3
E	2.1	2.1	3.2	3.2	3.2	4.6	4.6	4.6
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Type numbering system (Example : 35V 150µF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
P	C	M	1	V	1	5	1	M	C	L	1	G	S

- 1–3: Type
- 4–5: Rated voltage (35V)
- 6–8: Rated capacitance (150µF)
- 9: Capacitance tolerance (±20%)
- 10–11: Configuration
- 12: Size code
- 13–14: Taping code

Voltage

V	16	20	25	35	50	63	80
Code	C	D	E	V	H	J	K

● Frequency coefficient of rated ripple current

Frequency	120Hz	1kHz	10kHz	100kHz or more
Coefficient	0.05	0.30	0.70	1.00

Design, Specifications are subject to change without notice.

NICHICON CORPORATION

Oct.2019

CONDUCTIVE POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS

PCM

■Dimensions

Rated Voltage (V) (code)	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Initial ESR (mΩ) (20°C / 100kHz)	Low temp. ESR after Endurance (mΩ) (-40°C / 100kHz)	Rated Ripple (mArms) (125°C/100kHz)	Part Number
16 (1C)	20	120	6.3×6	0.08	36	72	1200	PCM1C121MCL1GS
		220	■6.3×8	0.08	23	46	1700	PCM1C221MCL4GS
		220	8×7	0.08	30	60	1500	PCM1C221MCL1GS
		470	▲8×10	0.08	17	34	2400	PCM1C471MCL6GS
		470	10×8	0.08	22	44	1900	PCM1C471MCL1GS
		560	8×12	0.08	16	32	2700	PCM1C561MCL1GS
		680	10×10	0.08	19	38	2300	PCM1C681MCL1GS
		1000	10×12.7	0.08	13	26	2800	PCM1C102MCL1GS
20 (1D)	25	100	6.3×6	0.08	41	82	1200	PCM1D101MCL1GS
		150	■6.3×8	0.08	25	50	1700	PCM1D151MCL4GS
		150	8×7	0.08	39	78	1700	PCM1D151MCL1GS
		330	▲8×10	0.08	19	38	2400	PCM1D331MCL6GS
		330	10×8	0.08	23	46	2000	PCM1D331MCL1GS
		470	8×12	0.08	18	36	2800	PCM1D471MCL1GS
		560	10×10	0.08	20	40	2500	PCM1D561MCL1GS
		680	10×12.7	0.08	14	28	3500	PCM1D681MCL1GS
25 (1E)	31	56	6.3×6	0.08	43	86	1200	PCM1E560MCL1GS
		100	■6.3×8	0.08	27	54	1700	PCM1E101MCL4GS
		100	8×7	0.08	41	82	1700	PCM1E101MCL1GS
		220	▲8×10	0.08	20	40	2400	PCM1E221MCL6GS
		220	10×8	0.08	24	48	2000	PCM1E221MCL1GS
		270	8×12	0.08	19	38	2800	PCM1E271MCL1GS
		330	10×10	0.08	20	40	2500	PCM1E331MCL1GS
		470	10×12.7	0.08	15	30	3500	PCM1E471MCL1GS
35 (1V)	43	47	6.3×6	0.08	48	96	1200	PCM1V470MCL1GS
		68	■6.3×8	0.08	31	62	1700	PCM1V680MCL4GS
		68	8×7	0.08	44	88	1700	PCM1V680MCL1GS
		150	▲8×10	0.08	22	44	2400	PCM1V151MCL6GS
		150	10×8	0.08	25	50	2000	PCM1V151MCL1GS
		220	8×12	0.08	21	42	2800	PCM1V221MCL1GS
		270	10×10	0.08	20	40	2500	PCM1V271MCL1GS
		330	10×12.7	0.08	16	32	3500	PCM1V331MCL1GS
50 (1H)	63	22	6.3×6	0.08	50	100	1000	PCM1H220MCL1GS
		39	■6.3×8	0.08	36	72	1200	PCM1H390MCL4GS
		39	8×7	0.08	45	90	1600	PCM1H390MCL1GS
		82	▲8×10	0.08	26	52	2100	PCM1H820MCL6GS
		82	10×8	0.08	34	68	2000	PCM1H820MCL1GS
		120	△8×12	0.08	25	50	2500	PCM1H121MCL2GS
		120	10×10	0.08	25	50	2500	PCM1H121MCL1GS
		180	10×12.7	0.08	19	38	3200	PCM1H181MCL1GS
63 (1J)	79	12	6.3×6	0.08	51	102	1000	PCM1J120MCL1GS
		22	■6.3×8	0.08	45	90	1200	PCM1J220MCL4GS
		22	8×7	0.08	48	96	1600	PCM1J220MCL1GS
		39	8×10	0.08	28	56	2100	PCM1J390MCL1GS
		47	10×8	0.08	35	70	2000	PCM1J470MCL1GS
		56	8×12	0.08	27	54	2500	PCM1J560MCL1GS
		68	10×10	0.08	28	56	2500	PCM1J680MCL1GS
		100	10×12.7	0.08	24	48	3200	PCM1J101MCL1GS
80 (1K)	100	12	6.3×8	0.08	50	100	1000	PCM1K120MCL1GS
		27	8×10	0.08	38	76	1400	PCM1K270MCL1GS
		39	8×12	0.08	35	70	1800	PCM1K390MCL1GS
		47	10×10	0.08	33	66	1800	PCM1K470MCL1GS
		68	10×12.7	0.08	28	56	2200	PCM1K680MCL1GS

Rated ripple current (mArms) at 125°C 100kHz

No marked, [1] will be put at 12th digit of type numbering system.
△: In this case, [2] will be put at 12th digit of type numbering system.
■: In this case, [4] will be put at 12th digit of type numbering system.
▲: In this case, [6] will be put at 12th digit of type numbering system.

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