

Vertical SMD Type

For CD/DVD-ROM, Navigation, LCD MT/TV

Size from $\Phi 4 \times 5.4L$ to $\Phi 18 \times 21.5L$

Guaranteed 2000 hours at 85°C

RoHS compliant

Halogen-free

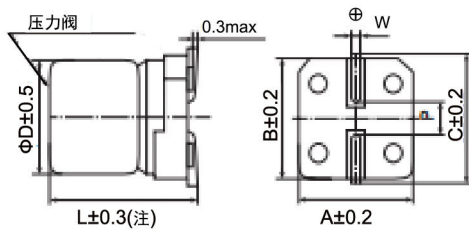


Specifications

No.	Item	Performance												
1	Temperature range(°C)	-40 to +85												
2	Rated Voltage Range	4-450VDC												
3	Leakage current (µA)	Rated Voltage (VDC)	4-100									160-450		
		4X5.4-10X10.5	0.01CV or 3µA, whichever is greater (at 20°C, 2minutes)									--		
		12.5X13.5-18X21.5	0.03CV or 4µA, whichever is greater (at 20°C, 1minutes)									0.04CV+100µA (at 20°C, 1minutes)		
4	Capacitance tolerance (%)	±20 (20°C,120Hz)												
5	Tangent of the loss angle (Tan δ)	Rated voltage (V)	4	6.3	10	16	25	35	50	63	100	160-250	400-450	
		Tanδ(max)	B054-G105	0.42	0.35	0.30	0.26	0.16	0.14	0.12	0.12	0.12	—	—
			H135-K215		0.38	0.34	0.30	0.26	0.22	0.18	0.14	0.10	0.20	0.25
(20°C,120Hz)														
6	Low temperature characteristics Impedance ratio (max)	Rated voltage (V)	4	6.3	10	16	25	35	50	63	100	160-250	400-450	
		B054-G105	$Z_{(-25^{\circ}C)}/Z_{(+20^{\circ}C)}$	7	4	3	2	2	2	2	2	2	—	—
			$Z_{(-40^{\circ}C)}/Z_{(+20^{\circ}C)}$	17	10	8	6	4	3	3	3	3	—	—
		H135-K215	$Z_{(-25^{\circ}C)}/Z_{(+20^{\circ}C)}$	—	5	4	3	2	2	2	2	2	3	6
			$Z_{(-40^{\circ}C)}/Z_{(+20^{\circ}C)}$	—	12	10	8	5	4	3	3	3	6	10
7	Endurance (85°C) (Applied ripple current)	Test time	The following specifications shall be satisfied when the capacitors are restores to 20°C after the rated voltage is applied for 2,000 hours at 85°C											
		Rated Voltage(VDC)	4-6.3			10-100				160-450				
		Leakage current	The initial specified value or less											
		Percentage of capacitance change	Within ± 30% of initial value				Within ± 25% of initial value				Within ± 20% of initial value			
		Tangent of the loss angle	300% or less of the initial specified value									200% or less of the initial specified value		
8	Shelf life (85°C)	Test time	The following specifications shall be satisfied when the capacitors are restores to 20°C after exposing them for 1,000 hours at 85°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum for 30 minutes, at least 24 hours and not more than 48 hours before the measurements.											
		Rated Voltage(VDC)	4-6.3			10-100				160-450				
		Leakage current	The initial specified value or less											
		Percentage of capacitance change	Within ± 30% of initial value				Within ± 25% of initial value				Within ± 20% of initial value			
		Tangent of the loss angle	300% or less of the initial specified value									300% or less of the initial specified value		



Dimensions

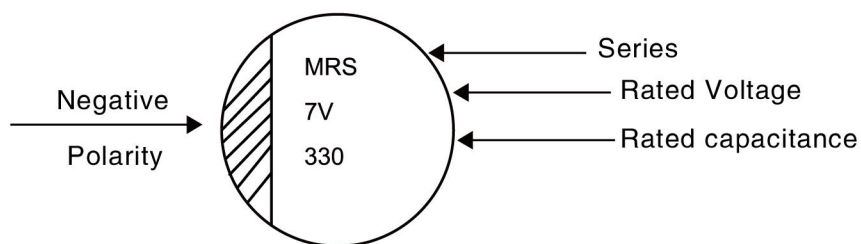


: Dummy terminals

Note1: $L \pm 0.5$ for 8x7 (F070)-18x21.5 (K215)

Case Code	D	L	A	B	C	W	P
B054	4	5.4	4.3	4.3	5.1	0.5-0.8	1.0
C054	5	5.4	5.3	5.3	5.9	0.5-0.8	1.4
E054	6.3	5.4	6.6	6.6	7.2	0.5-0.8	1.9
E077	6.3	7.7	6.6	6.6	7.2	0.5-0.8	1.9
F070	8	7.0	8.3	8.3	9.0	0.7-1.1	3.1
F105	8	10.5	8.3	8.3	9.0	0.7-1.1	3.1
G105	10	10.5	10.3	10.3	11.0	0.7-1.1	4.7
H135	12.5	13.5	13.0	13.0	13.7	1.0-1.3	4.2
H165	12.5	16.5	13.0	13.0	13.7	1.0-1.3	4.2
J165	16	16.5	17.0	17.0	18.0	1.0-1.3	6.5
J215	16	21.5	17.0	17.0	18.0	1.0-1.3	6.5
K165	18	16.5	19.0	19.0	20.0	1.0-1.3	6.5
K215	18	21.5	19.0	19.0	20.0	1.0-1.3	6.5

Marking



Coefficient of Frequency for Ripple Current

Case Code	Frequency (Hz)	120	1K	10K	100K
	Capacitance (uF)				
B054-G105	1.0	1.00	1.50	1.75	1.80
	2.2 to 10	1.00	1.30	1.40	1.50
	22 to 1,500	1.00	1.05	1.08	1.08
H135-K215	4.7	1.00	1.75	2.30	2.50
	10 to 68	1.00	1.50	1.75	1.80
	100 to 1,000	1.00	1.30	1.40	1.50
	2,200-10,000	1.00	1.05	1.08	1.08



Dimension: Φ DXL(mm)
Ripple Current: mA/rms at 120Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	4V		6.3V		10V		16V		25V	
	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA
10									4X5.4	24
22					4X5.4	26	4X5.4	26	4X5.4	24
33	4X5.4	25	4X5.4	30	4X5.4	30	5X5.4	37	5X5.4	47
47	4X5.4	30	4X5.4	33	5X5.4	44	5X5.4	44	6.3X5.4	60
56	5X5.4	40	5X5.4	40	5X5.4	44	5X5.4	70	6.3X5.4	66
100	6.3X5.4	50	6.3X5.4	70	6.3X5.4	70	6.3X5.4	70	6.3X7.7	120
150			6.3X5.4	70	6.3X5.4	79	6.3X7.7	110	8X10.5	210
220	6.3X5.4	80	6.3X5.4	88	6.3X7.7	130	6.3X7.7	130	8X10.5	260
330	6.3X7.7	80	6.3X7.7	135	8X10.5	270	8X10.5	270	8X10.5	300
470	6.3X7.7	150	8X10.5	280	8X10.5	280	8X10.5	280	10X10.5	400
680	8X10.5	290	8X10.5	290	10X10.5	430	10X10.5	380	10X13.5	400
820	10X10.5	320	8X10.5	320	10X10.5	430	12.5X13.5	710	10X13.5	400
1,000	8X10.5	290	10X10.5	430	10X10.5	430	12.5X13.5	710	12.5X13.5	820
1,500	10X13.5	320	10X10.5	480	10X13.5	430	16X16.5	710	16X16.5	1,000
2,200	12.5X13.5	350	12.5X13.5	890	12.5X13.5	900	16X16.5	1,150	16X21.5	1,000
2,200					16X16.5	1,000			18X16.5	1,000
3,300	16X16.5	380	12.5X16.5	1,000	16X16.5	1,300	16X21.5	1,450	18X21.5	1,500
3,300			16X16.5	1,200			18X16.5	1,450		
4,700	16X21.5	380	16X16.5	1,400	16X21.5	1,300	18X21.5	1,450	18X21.5	1,800
4700					18X16.5	1,400				
6,800	16X21.5	380	16X21.5	1,750	18X21.5	1,700	18X21.5	1,750		
6,800			18X16.5	1,700						
10,000	18X21.5	400	18X21.5	2,000						



Dimension: Φ DXL(mm)

Ripple Current: mA/rms at 120Hz,85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	35V		50V		63V		100V	
	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA
1.0					4X5.4	8.0		
2.2					4X5.4	12		
3.3			4X5.4	15	5X5.4	17		
4.7	4X5.4	18	4X5.4	18	5X5.4	20		
10	4X5.4	24	5X5.4	30	6.3X5.4	32	6.3X7.7	
22	5X5.4	41	6.3X5.4	47	6.3X7.7	60	8X10.5	90
33	6.3X5.4	54	6.3X7.7	70	8X10.5	110	10X10.5	120
47	6.3X5.4	54	6.3X7.7	190	8X10.5	130	10X10.5	120
56	6.3X7.7	54	6.3X7.7	190	10X10.5	160	10X10.5	120
68	6.3X7.7	54	8X10.5	190	10X10.5	170	12.5X13.5	380
100	8X10.5	120	10X10.5	190	12.5X13.5	380	12.5X13.5	440
150	8X10.5	210	10X10.5	320	10X13.5	580	16X16.5	440
220	10X10.5	260	10X13.5	320	12.5X13.5	580	16X21.5	850
220							18X16.5	800
330	10X10.5	360	12.5X13.5	600	12.5X16.5	720	18X21.5	900
330					16X16.5	820		
470	10X13.5	600	12.5X16.5	740	16X16.5	950	18X21.5	1,000
470			16X16.5	850	18X16.5	1,000		
1,000	16X16.5	1,100	18X16.5	1,300				
1,000			16X21.5	1,400				
2,200	16X21.5	1,550						



DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: Φ DXL(mm)
Ripple Current: mA/rms at 120Hz, 85°C

V.DC Contents μ F	160V		200V		250V		400V		450V	
	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA
4.7			6.3X7.7	150	8X10.5	100	12.5X13.5	120	12.5X13.5	120
10	8X10.5	200	8X10.5	200	12.5X13.5	150	16X16.5	140	16X16.5	140
22	10X10.5	300	12.5X13.5	240	12.5X16.5	240	16X21.5	280	18X16.5	280
22							18X16.5	280		
33	10X13.5	300	12.5X16.5	310	16X16.5	340	18X21.5	350	18X21.5	260
47	12.5X13.5	370	16X16.5	420	16X21.5	420				
47					18X16.5	420				
68	16X16.5	500	16X21.5	510	18X21.5	490				
68			18X16.5	510						
100	16X21.5	590	18X21.5	590						
100	18X16.5	590								

