

Vertical SMD Type

For ECU, ESA

Size from $\Phi 6.3 \times 5.7L$ to $\Phi 18 \times 21.5L$

Guaranteed 1000–2000 hours at 125°C

RoHS compliant

Halogen-free

Photo



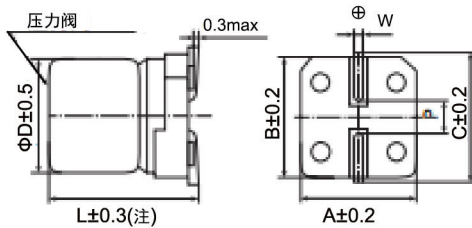
Marking color: Blue

Specifications

No.	Item	Performance												
1	Temperature range(°C)	-40 to +125												
2	Rated Voltage Range	10-450VDC												
3	Leakage current (µA)	Rated Voltage (VDC)	10-100						160-450					
		6.3X5.7-10X10.5	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)	10	16	25	35	50	63	80	100	160-250	400-450		
		Tanδ(max)	E057-G105	0.24	0.20	0.16	0.14	0.14	0.12	0.12	0.10	-	-	
		H135-K215	0.22	0.18	0.16	0.14	0.12	0.14	-	0.10	0.20	0.25		
0.02 is added to each 1000µF increase over 1000µF (20°C, 120Hz)														
6	Low temperature characteristics Impedance ratio (max)	Rated voltage (V)	10	16	25	35	50	63	80	100	160-250	400-450		
		E057-G105	$Z_{(-25^{\circ}\text{C})}/Z_{(+20^{\circ}\text{C})}$	3	2	2	2	2	2	2	3	-	-	
			$Z_{(-40^{\circ}\text{C})}/Z_{(+20^{\circ}\text{C})}$	8	6	4	3	3	3	3	4	-	-	
		H135-K215	$Z_{(-25^{\circ}\text{C})}/Z_{(+20^{\circ}\text{C})}$	4	3	2	2	2	2	-	2	3	6	
			$Z_{(-40^{\circ}\text{C})}/Z_{(+20^{\circ}\text{C})}$	10	8	5	4	3	3	-	3	6	10	
7	Endurance (125°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 125°C (E057-F063 1,000 hours)											
		Rated Voltage(VDC)	10-450											
		Leakage current	The initial specified value or less											
		Percentage of capacitance change	Within ± 30% of initial value											
		Tangent of the loss angle	300% or less of the initial specified value											
8	Shelf life (125°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 125°C without voltage applied(400–450V: 1000 hours). 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)	10-50						63-450					
		Leakage current	The initial specified value or less						500% or less of the initial specified value					
		Percentage of capacitance change	Within ± 30% of initial value						Within ± 30% 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

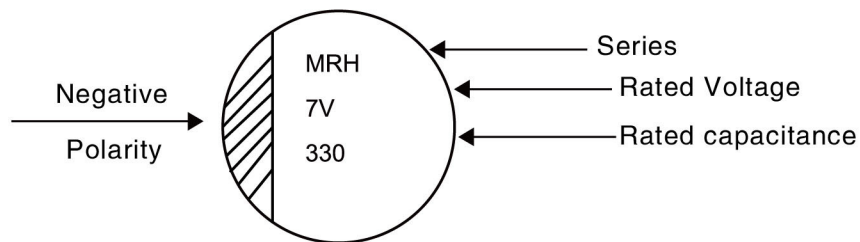


▨: Dummy terminals

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

Case Code	D	L	A	B	C	W	P
E057	6.3	5.7	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

Rated Voltage	Case Code	Frequency (Hz)				
		Capacitance (uF)	120	1K	10K	100K
10-100	E057-G105	10	0.66	0.86	0.93	1.00
		22 to 470	0.93	0.97	1.00	1.00
	H135-K215	47-100	0.40	0.75	0.90	1.00
		680 to 1,000	0.50	0.85	0.94	1.00
		2,200 to 3,300	0.60	0.87	0.95	1.00
		4,700	0.75	0.90	0.98	1.00
160-450	H135-K215	3.3-33	1.00	1.50	1.75	1.80
		47-60	1.00	1.30	1.40	1.50



Dimension: Φ DXL(mm)
Ripple Current: mA/rms at 100KHz, 125°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	10V		16V		25V	
	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA
33					6.3X5.7	65
47			6.3X5.7	70	6.3X7.7	70
47					8X7	110
100	6.3X7.7	80	6.3X7.7	75	6.3X7.7	110
100	8X7	85			8X7	110
100					8X10.5	180
220	6.3X7.7	100	8X10.5	200	8X10.5	180
220	8X7	110	10X10.5	250	10X10.5	200
220	8X10.5	140				
330	8X10.5	150	10X10.5	295	10X10.5	295
330	10X10.5	200	12.5X13.5	500	12.5X13.5	500
470	10X10.5	350			12.5X13.5	500
470					16X16.5	600
680	12.5X13.5	450	12.5X13.5	500	16X16.5	700
680			16X16.5	600	18X16.5	750
1,000	12.5X13.5	500	18X16.5	800	18X21.5	800
1,000						
2,200	16X16.5	700	16X16.5	800		
2,200	16X16.5	750	18X16.5	850		
3,300	16X16.5	800				
4,700	18X21.5	850				



Dimension: Φ DXL(mm)

Ripple Current: mA/rms at 100KHz, 125°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	35V		50V		63V		80V		100V	
	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA	Φ DXL	mA
10	6.3X5.7	69	6.3X5.7	50	6.3X7.7	60	8X10.5	70	8X10.5	70
10			8X7		8X7	60				
22	6.3X5.7	69	6.3X7.7	80	8X10.5	80	8X10.5	70	8X10.5	70
22			8X7	85			10X10.5	110	10X10.5	110
33	6.3X7.7	75	6.3X7.7	100	8X10.5	80			10X10.5	110
33	8X7	80	8X7	140	10X10.5	110	8X10.5	70	10X13.5	110
33			8X10.5				10X10.5	110		
47	6.3X7.7	75	8X10.5	150	8X10.5	100	10X10.5	110	12.5X13.5	300
47	8X7	80	10X10.5	170	10X10.5	110	10X13.5	110		
47	8X10.5	100								
68	8X10.5	150			10X13.5	150			16X16.5	400
100	8X10.5	180	10X10.5	245	12.5X13.5	150			16X16.5	450
100	10X10.5	200	12.5X13.5	400						
220	10X10.5	200	12.5X13.5	550	12.5X16.5	300			18X21.5	500
220			16X16.5	600						
330	12.5X13.5	500	12.5X16.5	650	16X16.5	350				
330	16X16.5	550	16X16.5	700						
470	12.5X16.5	750	18X16.5	900	16X21.5	400				
470	16X16.5	800								
680	18X16.5	1000								



Dimension: Φ DXL(mm)
Ripple Current: mA/rms at 100KHz, 125°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

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
3.3									12.5X16.0	65
4.7							12.5X13.5	70	16X16.5	85
6.8							16X16.5	100		
10	12.5X13.5	100	12.5X13.5	100	12.5X16.0	110	16X21.5	140	18X21.5	145
10							18X16.5	135		
22	16X16.5	180	16X16.5	180	16X21.5	200				
22					18X16.5	200				
33	18X16.5	240	16X21.5	250	18X21.5	260				
33			18X16.5	240						
47			18X21.5	250						
68	18X21.5	250								

