



AREP SERIES

3000 HOURS POWER TYPE

ALUMINUM SOLID ELECTROLYTIC CAPACITOR • THT type
 Ultra-high ripple current up to 6.6A at 100kHz/105°C
 Ultra-low ESR up to 7mΩ at 100kHz/20°C
 Low drift and stable electrical characteristics over lifetime
 No liquid electrolyte ▲ No dry-out effect
Long lifetime with 3000 hours at 105°C

SPECIFICATION

Item		Characteristics
Category Temperature Range		-55°C to +105°C
Rated Voltage Range	V_R	6.3V _{DC} to 35V _{DC}
Rated Capacitance Range	C_R	100μF to 2200μF
Capacitance Tolerance • At 20°C; 120Hz	ΔC	±20%
Surge Voltage • At 105°C	V_S	$V_S = 1.15 \times V_R$
Dissipation Factor • At 20°C; 120Hz	$\tan \delta$	0.1 max.
Leakage Current • At 20°C; after 2min.	I_{LEAK}	Shall not exceed values in the electrical characteristics
Endurance	Test	105°C ▲ 3000hrs ▲ V_R applied
	Appearance	No significant damage
	$\Delta C/C_R$	≤ ±20% of the initial value
	$\tan \delta$	≤ 150% of the initial specified value
	ESR	≤ 150% of the initial specified value
Damp Heat (Steady State)	Test	60°C ▲ 90 ~ 95% RH ▲ 1000hrs ▲ No voltage applied
	Appearance	No significant damage
	$\Delta C/C_R$	≤ ±20% of the initial value
	$\tan \delta$	≤ 150% of the initial specified value
	ESR	≤ 150% of the initial specified value
Surge Voltage	Test	1000 cycles and each one includes charge with V_S specified at 105°C for 0.5min through a protective resistor ($R=1k\Omega$) and discharge for 5.5min.
	Appearance	No significant damage
	$\Delta C/C_R$	≤ ±20% of the initial value
	$\tan \delta$	≤ 150% of the initial specified value
	ESR	≤ 150% of the initial specified value
	I_{LEAK}	≤ The initial specified value

ELECTRICAL CHARACTERISTICS

V _{R DC} (V)	C _R (μF)	Size Code	Dimensions (mm)				I _{LEAK} 20°C 2min (μA)	ESR 20°C 100kHz (mΩ)	I _R 105°C 100kHz (mA)	Part Number ^{Note 1}
			D	L	P	Ød				
6.3	220	06X5	6.3	5	2.5	0.45	277	15	3160	6R3AREP221M06X5T
	270	05X7	5	7	2	0.5	340	12	3500	6R3AREP271M05X7T
	330	05X8	5	8	2	0.5	500	8	4050	6R3AREP331M05X8T
	330	06X5	6.3	5	2.5	0.45	500	17	3390	6R3AREP331M06X5T
	330	06X8	6.3	8	2.5	0.6	500	8	4700	6R3AREP331M06X8T
	390	05X8	5	8	2	0.5	500	11	3700	6R3AREP391M05X8T
	470	05X8	5	8	2	0.5	592	8	4050	6R3AREP471M05X8T
	470	06X8	6.3	8	2.5	0.6	592	8	4700	6R3AREP471M06X8T
	560	06X8	6.3	8	2.5	0.6	705	8	4700	6R3AREP561M06X8T
	680	06X8	6.3	8	2.5	0.6	857	8	4700	6R3AREP681M06X8T
	820	06X8	6.3	8	2.5	0.6	1033	8	4700	6R3AREP821M06X8T
	1000	06A0	6.3	10	2.5	0.6	1260	8	4700	6R3AREP102M06A0T
	1000	08X8	8	8	3.5	0.6	1260	7	6100	6R3AREP102M08X8T
	1200	08A2	8	12	3.5	0.6	1512	7	6100	6R3AREP122M08A2T
	1500	08A2	8	12	3.5	0.6	1890	7	6100	6R3AREP152M08A2T
1500	10A0	10	10	5	0.6	1890	12	5025	6R3AREP152M10A0T	
1500	10A2	10	12	5	0.6	1890	7	6640	6R3AREP152M10A2T	
6.8	270	05X7	5	7	2	0.5	367	12	3500	6R8AREP271M05X7T
	330	05X8	5	8	2	0.5	449	11	3800	6R8AREP331M05X8T
	470	05X8	5	8	2	0.5	639	8	3200	6R8AREP471M05X8T
	500	05X8	5	8	2	0.5	680	11	3800	6R8AREP501M05X8T
	820	06X8	6.3	8	2.5	0.6	1115	8	5500	6R8AREP821M06X8T
	1000	06A0	6.3	10	2.5	0.6	1360	8	5500	6R8AREP102M06A0T
7.5	270	05X7	5	7	2	0.5	405	12	3500	7R5AREP271M05X7T
	390	05X8	5	8	2	0.5	585	11	3800	7R5AREP391M05X8T
	500	05X8	5	8	2	0.5	750	12	3500	7R5AREP501M05X8T
	560	06X8	6.3	8	2.5	0.6	705	8	4700	7R5AREP561M06X8T
	680	06X8	6.3	8	2.5	0.6	1020	12	4780	7R5AREP681M06X8T
	820	06A1	6.3	11	2.5	0.6	1230	10	5200	7R5AREP821M06A1T
10	220	06X8	6.3	8	2.5	0.6	440	10	4500	100AREP221M06X8T
	330	06X8	6.3	8	2.5	0.6	660	10	4500	100AREP331M06X8T
	470	06A0	6.3	10	2.5	0.6	940	10	4700	100AREP471M06A0T
	560	06A0	6.3	10	2.5	0.6	1120	10	4700	100AREP561M06A0T
	680	08X8	8	8	3.5	0.6	1360	12	4700	100AREP681M08X8T
	820	08A2	8	12	3.5	0.6	1640	7	6100	100AREP821M08A2T
	1000	08A2	8	12	3.5	0.6	2000	8	6100	100AREP102M08A2T
	1200	08A2	8	12	3.5	0.6	2400	12	3900	100AREP122M08A2T

Notes

1 Part number shows the standard Tape/Ammo version


ELECTRICAL CHARACTERISTICS

V _{R DC} (V)	C _R (μF)	Size Code	Dimensions (mm)				I _{LEAK} 20°C 2min (μA)	ESR 20°C 100kHz (mΩ)	I _R 105°C 100kHz (mA)	Part Number ^{Note 1}
			D	L	P	Ød				
12	470	06A0	6.3	10	2.5	0.6	1128	12	3900	120AREP471M06A0T
	560	06A0	6.3	10	2.5	0.6	1344	12	3900	120AREP561M06A0T
16	100	05X8	5	8	2	0.5	320	18	2690	160AREP101M05X8T
	220	05X8	5	8	2	0.5	704	18	2600	160AREP221M05X8T
	220	06X8	6.3	8	2.5	0.6	704	15	3200	160AREP221M06X8T
	270	06X8	6.3	8	2.5	0.6	864	15	3800	160AREP271M06X8T
	330	06X8	6.3	8	2.5	0.6	1056	20	2800	160AREP331M06X8T
	470	06A1	6.3	11	2.5	0.6	1505	16	4000	160AREP471M06A1T
	470	08X8	8	8	3.5	0.6	1505	16	4000	160AREP471M08X8T
	470	08A2	8	12	3.5	0.6	1505	10	5230	160AREP471M08A2T
	470	1010	10	10	5	0.6	1505	10	4350	160AREP471M1010T
	470	10A2	10	12	5	0.6	1505	10	6100	160AREP471M10A2T
	560	06A1	6.3	11	2.5	0.6	1792	20	3500	160AREP561M06A1T
	560	08A2	8	12	3.5	0.6	1792	14	4950	160AREP561M08A2T
	680	08A2	8	12	3.5	0.6	2176	10	5230	160AREP681M08A2T
	820	08A2	8	12	3.5	0.6	2624	10	5230	160AREP821M08A2T
	1000	08A6	8	16	3.5	0.6	3200	10	6100	160AREP102M08A6T
	1000	10A2	10	12	5	0.6	3200	12	5400	160AREP102M10A2T
	1200	10A2	10	12	5	0.6	3840	10	6100	160AREP122M10A2T
1500	08A6	8	16	3.5	0.6	4800	10	6100	160AREP152M08A6T	
2200	10B0	10	20	5	0.6	7040	8	8100	160AREP222M10B0T	
20	330	06A0	6.3	10	2.5	0.6	1320	16	3460	200AREP331M06A0T
	390	0811	8	11	3.5	0.6	1560	14	4970	200AREP391M0811T
	470	08A2	8	12	3.5	0.6	1880	14	4970	200AREP471M08A2T
	680	08A6	8	16	3.5	0.6	1360	16	4650	200AREP681M08A6T
25	330	10A2	10	12	5	0.6	1650	16	5100	250AREP331M10A2T
	470	08A2	8	12	3.5	0.6	2350	16	4650	250AREP471M08A2T
	470	10A2	10	12	5	0.6	2350	17	4650	250AREP471M10A2T
	560	08A6	8	16	3.5	0.6	2800	14	5000	250AREP561M08A6T
	560	10A2	10	12	5	0.6	2800	14	5100	250AREP561M10A2T
	680	08A6	8	16	3.5	0.6	3400	14	5000	250AREP681M08A6T
	680	10A2	10	12	5	0.6	3400	14	5100	250AREP681M10A2T
	820	08B0	8	20	3.5	0.6	4100	13	5100	250AREP821M08B0T
	1000	10A6	10	16	5	0.6	5000	13	5200	250AREP102M10A6T
1500	10B0	10	20	5	0.6	7500	13	5300	250AREP152M10B0T	
35	100	06X8	6.3	8	2.5	0.6	700	35	2350	350AREP101M06X8T
	330	10A2	10	12	5	0.6	2310	24	4000	350AREP331M10A2T
	470	08B0	8	20	3.5	0.6	3290	20	4400	350AREP471M08B0T
	470	10A6	10	16	5	0.6	3290	25	4000	350AREP471M10A6T
	560	10A6	10	16	5	0.6	3920	23	4200	350AREP561M10A6T
	680	10B0	10	20	5	0.6	4760	20	4800	350AREP681M10B0T

Notes

1 Part number shows the standard Tape/Ammo version

APPLICATIONS

Input/Output Filter in DC/DC Converter	High Frequency Applications	Equipment with High Expected Life	Server & Industrial PC	Voltage Stabilizing in LED Panels
				

REFERENCE DATA ▲ 6R3AREP681M06X8T ▲ 680 μ F ▲ 6.3V ▲ 6.3 x 8.0mm

Fig. 1 • Frequency Characteristics of ESR & |Z|

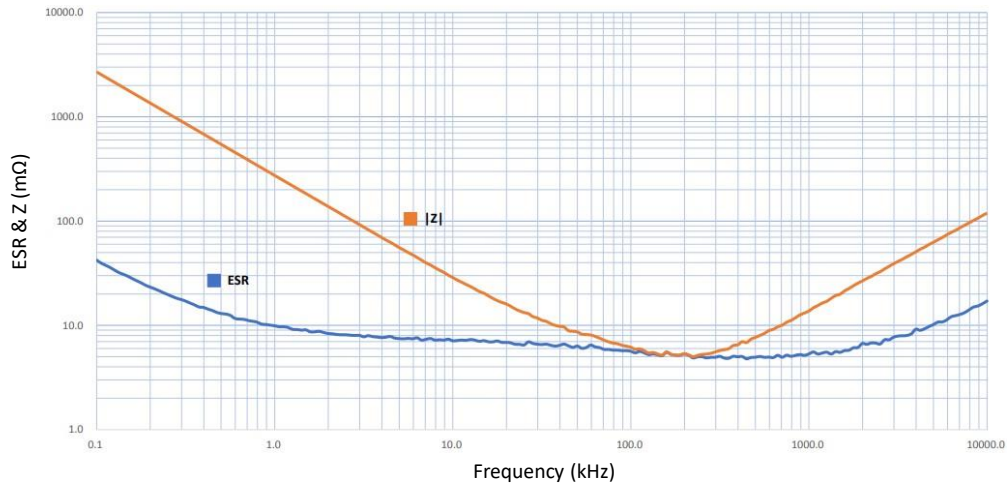


Fig. 2 • Frequency Characteristics of C (μF)

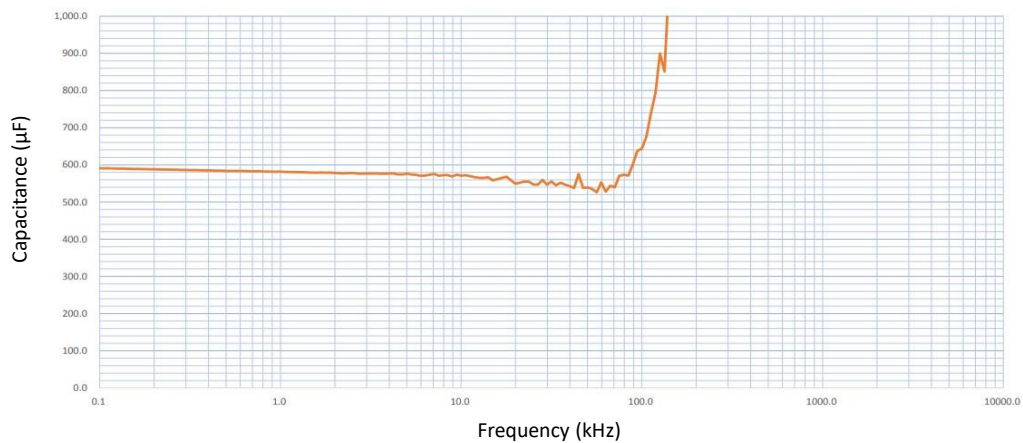
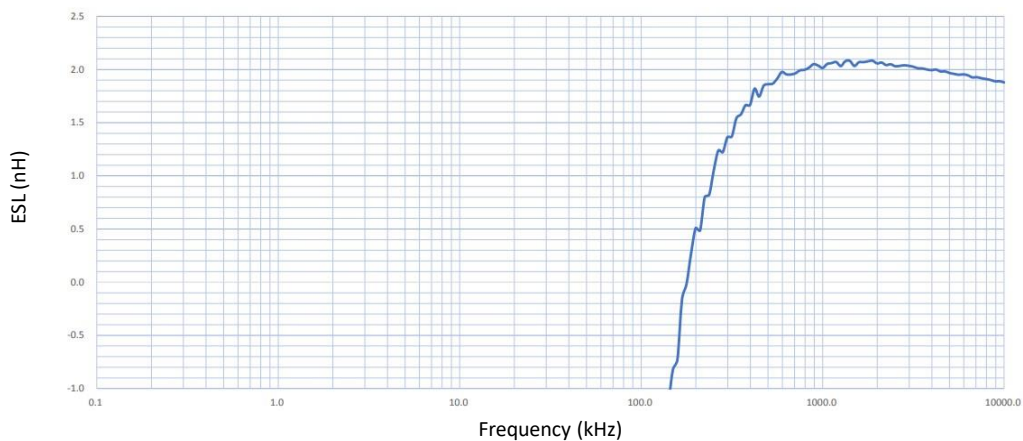


Fig. 3 • Frequency Characteristics of ESL (nH)



REFERENCE DATA ▲ 160AREP471M06A1T ▲ 470μF ▲ 16V ▲ 6.3 x 11.0mm

Fig. 4 • Frequency Characteristics of ESR & |Z|

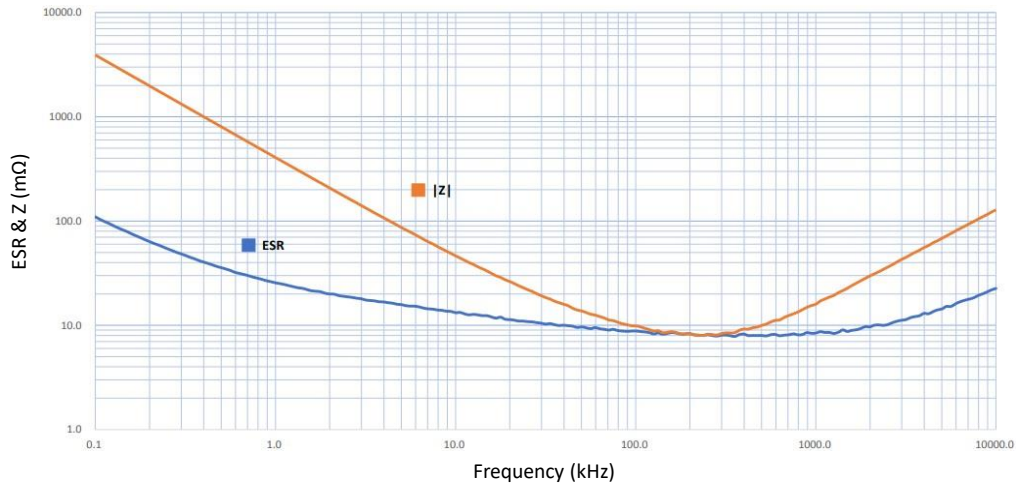


Fig. 5 • Frequency Characteristics of C (μF)

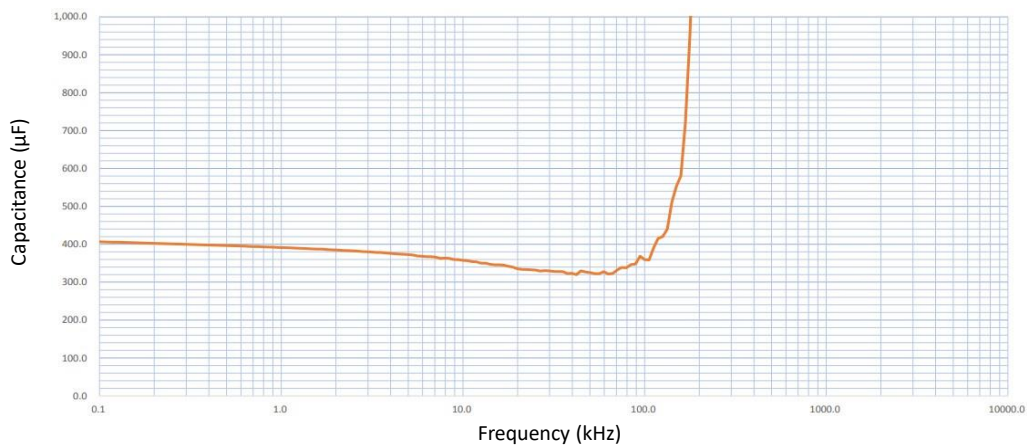
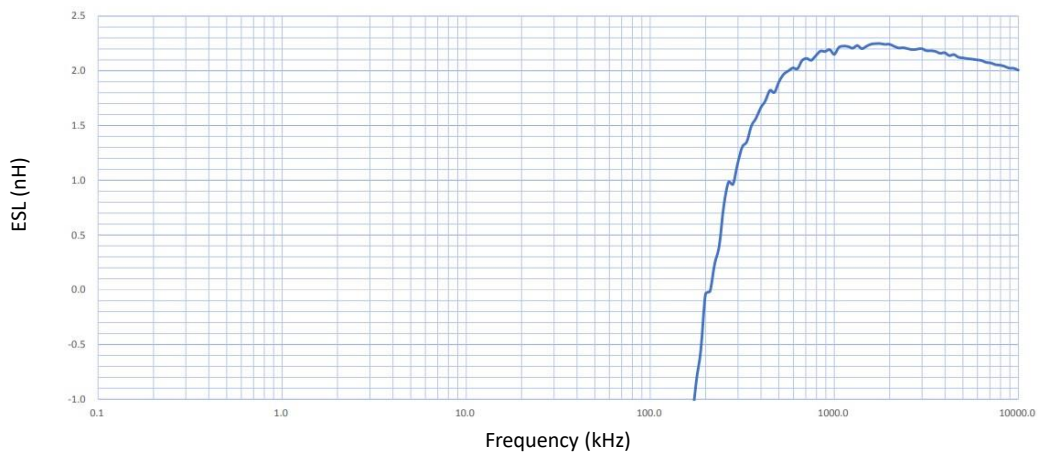


Fig. 6 • Frequency Characteristics of ESL (nH)



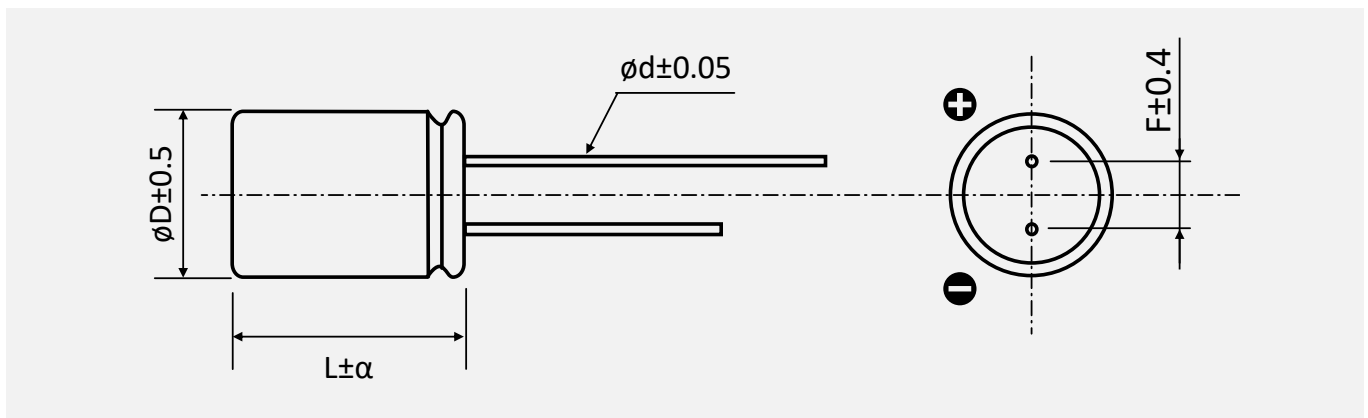
FREQUENCY CORRECTION FACTOR

Frequency Correction Factor of Permissible Ripple Current

Frequency	$120\text{Hz} \leq f < 1\text{kHz}$	$1\text{kHz} \leq f < 10\text{kHz}$	$10\text{kHz} \leq f < 50\text{kHz}$	$50\text{kHz} \leq f < 100\text{kHz}$	$100\text{kHz} \leq f < 500\text{kHz}$
Coefficient	0.05	0.3	0.7	0.85	1

PACKAGE OUTLINE ▲ All dimensions in mm

Dimensions



Size Code	$\varnothing D \pm 0.5 \text{ max.}$	L	α	$\varnothing d \pm 0.05$	$F \pm 0.4$
05X7	5.0	7.0	-0.5 to +1.0	0.50	2.0
05X8	5.0	8.0	-0.5 to +1.0	0.50	2.0
06X5	6.3	5.0	-0.5 to +1.0	0.45	2.5
06X8	6.3	8.0	-0.5 to +1.0	0.60	2.5
06A0	6.3	10.0	-0.5 to +1.0	0.60	2.5
06A1	6.3	11.0	-0.5 to +1.0	0.60	2.5
08X8	8.0	8.0	-0.5 to +1.0	0.60	3.5
0811	8.0	11.0	-0.5 to +1.0	0.60	3.5
08A2	8.0	12.0	-0.5 to +1.0	0.60	3.5
08A6	8.0	16.0	-0.5 to +1.0	0.60	3.5
08B0	8.0	20.0	-0.5 to +1.0	0.60	3.5
10A0	10.0	10.0	-0.5 to +1.0	0.60	5.0
1010	10.0	10.0	-0.5 to +1.0	0.60	5.0
10A2	10.0	12.0	-0.5 to +1.0	0.60	5.0
10A6	10.0	16.0	-0.5 to +1.0	0.60	5.0
10B0	10.0	20.0	-0.5 to +1.0	0.60	5.0

PRODUCT CODE

Example: AREP series ▲ 560 μ F ▲ 6.3V_{DC} ▲ \pm 20% ▲ D=6.3mm ▲ L=8mm ▲ F=2.5mm ▲ Tape/Ammo

6R3		AREP		561		M		06X8		T	
Rated Voltage (V _{dc})		Series		Capacitance Code ^{Note 1} (μ F)		Capacitance Tolerance (%)		Package Code		Packaging Type	
Code	VDC	Code	Series	Code	μ F	Code	Tol.	Code	D x L	Code	Type
6R3	6.3	AREP	AREP	101	100	M	\pm 20	05X7	5.0 x 7.0	Blank T	Bulk Tape/Ammo
6R8	6.8			471	470			05X8	5.0 x 8.0		
7R5	7.5			102	1000			06X5	6.3 x 5.0		
100	10.0			122	1200			06X8	6.3 x 8.0		
120	12.0			222	2200			06A0	6.3 x 10.0		
160	16.0			06A1	6.3 x 11.0						
200	20.0			08X8	8.0 x 8.0						
250	25.0			0811	8.0 x 11.0						
350	35.0			08A2	8.0 x 12.0						
				08A6	8.0 x 16.0						
		08B0	8.0 x 20.0								
		10A0	10.0 x 10.0								
		1010	10.0 x 10.0								
		10A2	10.0 x 12.0								
		10A6	10.0 x 16.0								
		10B0	10x0 x 20.0								

Note:

- 1 Capacitance code expressed in μ F. The first two digits represent significant figures. The last digit specifies the total number of zeros to be added.

PRODUCT MARKING

Marking	Details														
	<table border="1"> <thead> <tr> <th>Marking</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Logo</td> <td>Manufacturer Logo</td> </tr> <tr> <td>Series</td> <td>EP = AREP</td> </tr> <tr> <td>Date code</td> <td>See date code table</td> </tr> <tr> <td>Capacitance</td> <td>560 = 560μF</td> </tr> <tr> <td>Voltage</td> <td>6.3V = 6.3V</td> </tr> <tr> <td></td> <td>Polarity (-) marking</td> </tr> </tbody> </table>	Marking	Description	Logo	Manufacturer Logo	Series	EP = AREP	Date code	See date code table	Capacitance	560 = 560 μ F	Voltage	6.3V = 6.3V		Polarity (-) marking
Marking	Description														
Logo	Manufacturer Logo														
Series	EP = AREP														
Date code	See date code table														
Capacitance	560 = 560 μ F														
Voltage	6.3V = 6.3V														
	Polarity (-) marking														

DATE CODE

Example:

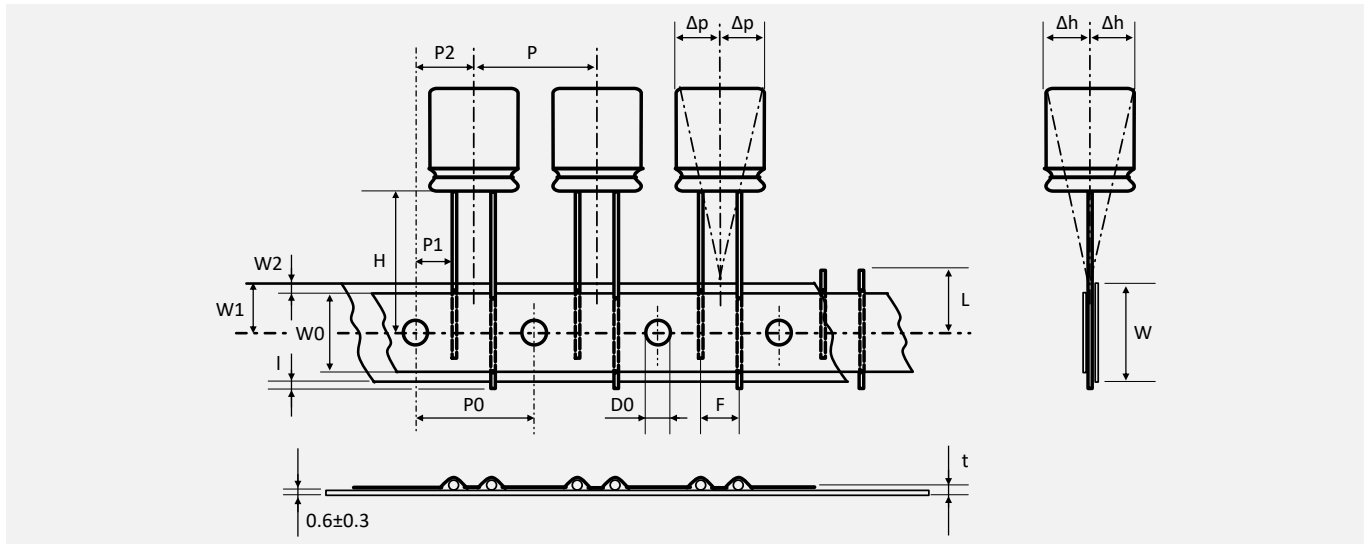
Date code

A01: A01 = 1st week of 2020

A		01	
Year		Week	
A	2019	01	1 st
B	2020	02	2 nd
...
Z	2030	53	53 rd

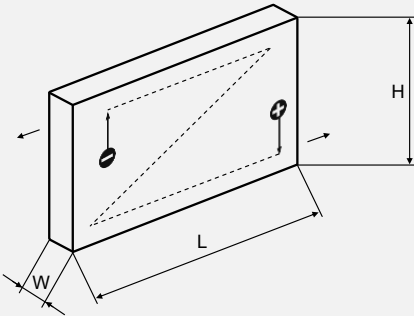
TAPING SPECIFICATION ▲ THT TYPE

Dimensions in mm



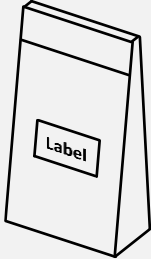
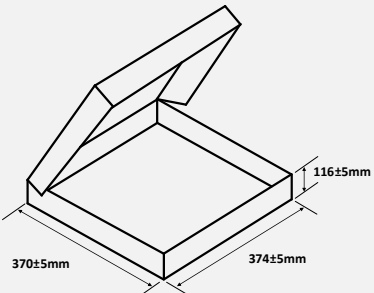
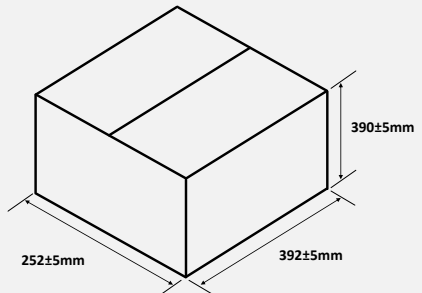
Size Code	F	P	P0	P1	P2	Δp	Δh	W	W0	W1	W2	H	ØD0	t	I	L
Tolerance	+0.8	±1.0	±0.2	±0.5	±1.0	±1.0	±1.0	±0.5	Min	±0.5	Max	±0.75	±0.2	±0.3	Max	max
	-0.2															
05X7	2	12.7	12.7	5.1	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
05X8	2	12.7	12.7	5.1	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
06X5	2.5	12.7	12.7	5.1	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
06X8	2.5	12.7	12.7	5.1	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
06A0	2.5	12.7	12.7	5.1	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
06A1	2.5	12.7	12.7	5.1	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
08X8	3.5	12.7	12.7	4.6	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
0811	3.5	12.7	12.7	4.6	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
08A2	3.5	12.7	12.7	4.6	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
08A6	3.5	12.7	12.7	4.6	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
08B0	3.5	12.7	12.7	4.6	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
10A0	5	12.7	12.7	3.85	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
1010	5	12.7	12.7	3.85	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
10A2	5	12.7	12.7	3.85	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
10A6	5	12.7	12.7	3.85	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11
10B0	5	12.7	12.7	3.85	6.35	0	0	18	9.5	9	2.5	18.5	4	0.6	0	11

AMMO PACKAGING QUANTITIES ▲ THT TYPE

Carton	Diameter (mm)	Length (mm)	Size Code	L max. (mm)	W max. (mm)	H max. (mm)	Qty per carton (pcs)
	∅ 5.0	7.0	05X7	335	42	260	2000
	∅ 5.0	8.0	05X8	335	42	260	2000
	∅ 6.3	5.0	06X5	335	39	260	2000
	∅ 6.3	8.0	06X8	335	42	260	2000
	∅ 6.3	10.0	06A0	335	45	260	2000
	∅ 6.3	11.0	06A1	335	45	260	2000
	∅ 8.0	8.0	08X8	335	42	260	1200
	∅ 8.0	11.0	0811	335	45	260	1200
	∅ 8.0	12.0	08A2	335	45	260	1200
	∅ 8.0	16.0	08A6	335	53	260	1200
	∅ 8.0	20.0	08B0	335	53	260	1200
	∅ 10.0	10.0	10A0	335	45	260	650
	∅ 10.0	10.0	1010	335	45	260	650
	∅ 10.0	12.0	10A2	335	45	260	650
	∅ 10.0	16.0	10A6	335	45	260	650
	∅ 10.0	20.0	10B0	335	55	260	650

BULK PACKAGING ▲ THT TYPE

Code	Capacitor Dimensions		Quantity / Bag	Quantity / Inner Box		Quantity outer box	
	ØD	L					
05X7	5.0	7.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
05X8	5.0	8.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
06X5	6.3	5.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
06X8	6.3	8.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
06A0	6.3	10.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
06A1	6.3	11.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
08X8	8.0	8.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
0811	8.0	11.0	400 pcs	4 bags	1 600 pcs	5 inner boxes	8 000 pcs
08A2	8.0	12.0	400 pcs	4 bags	1 600 pcs	5 inner boxes	8 000 pcs
08A6	8.0	16.0	300 pcs	4 bags	1 200 pcs	5 inner boxes	6 000 pcs
08B0	8.0	20.0	300 pcs	4 bags	1 200 pcs	5 inner boxes	6 000 pcs
10A0	10.0	10.0	300 pcs	4 bags	1 200 pcs	5 inner boxes	6 000 pcs
1010	10.0	10.0	300 pcs	4 bags	1 200 pcs	5 inner boxes	6 000 pcs
10A2	10.0	12.0	300 pcs	4 bags	1 200 pcs	5 inner boxes	6 000 pcs
10A6	10.0	16.0	200 pcs	4 bags	800 pcs	5 inner boxes	4 000 pcs
10B0	10.0	20.0	200 pcs	4 bags	800 pcs	5 inner boxes	4 000 pcs

Bag	Inner Box	Outer Carton
		
<p>Label content Size L x W = 70mm x 50mm</p> <ol style="list-style-type: none"> P/N: Customer part number R-ID: CCF1001290001 CCF: Fix 10: e.g., 2010 01: e.g., January 29: e.g., Day 29th 0001: Running number DESC: Customer specification SPEC: Manufacturer part number CO: Country of origin MAKER: Manufacturer VENDOR: Manufacturer DC: Date code LOT/NO: Production lot 	<p>Label on the inner box Size L x W = 70mm x 35mm</p> <ol style="list-style-type: none"> P/N: Customer part number DESC: Customer specification SPEC: Manufacturer part number CO: Country of origin QTY: Quantity (pcs) MAKER: Manufacturer VENDOR: Manufacturer DC: Date code LOT/NO: Production lot 	<p>Label on the outer carton Size L x W = 100mm x 90mm</p> <ol style="list-style-type: none"> CUSTOMER: Customer name P/O: Customer order number P/N: Customer part number DESCRIPTION: Manufacturer part number QTY: Quantity (pcs) and shipping date CO: Country of origin

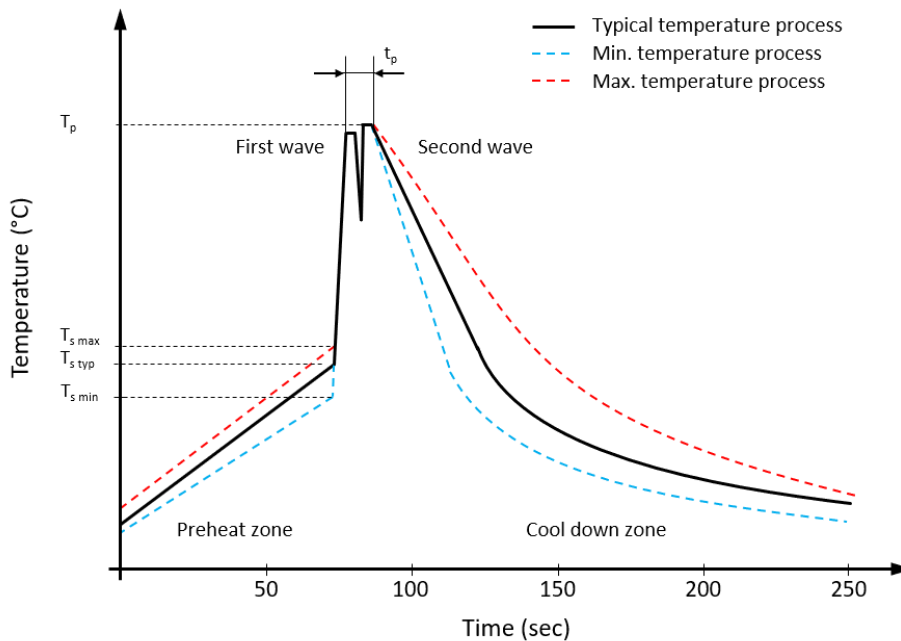
BULK PACKAGING ▲ THT TYPE WITH CUTTED LEADS NOTE 1

Code	Capacitor Dimensions		Quantity / Bag	Quantity / Inner Box		Quantity outer box	
	ØD	L					
05X7	5.0	7.0	500 pcs	8 bags	4 000 pcs	5 inner boxes	20 000 pcs
05X8	5.0	8.0	500 pcs	8 bags	4 000 pcs	5 inner boxes	20 000 pcs
06X5	6.3	5.0	500 pcs	12 bags	6 000 pcs	5 inner boxes	30 000 pcs
06X8	6.3	8.0	500 pcs	8 bags	4 000 pcs	5 inner boxes	20 000 pcs
06A0	6.3	10.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
06A1	6.3	11.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
08X8	8.0	8.0	500 pcs	6 bags	3 000 pcs	5 inner boxes	15 000 pcs
0811	8.0	11.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
08A2	8.0	12.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
08A6	8.0	16.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
08B0	8.0	20.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
10A0	10.0	10.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
1010	10.0	10.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
10A2	10.0	12.0	500 pcs	4 bags	2 000 pcs	5 inner boxes	10 000 pcs
10A6	10.0	16.0	400 pcs	4 bags	1 600 pcs	5 inner boxes	8 000 pcs
10B0	10.0	20.0	350 pcs	4 bags	1 400 pcs	5 inner boxes	7 000 pcs

Note:

1 Please consult MGT for possible lead length, drawing and ordering code.

RECOMMENDED WAVE SOLDERING PROFILE ▲ THT PACKAGE



Profile Features		Value - Sn-Pb Assembly	Value - Pb-free Assembly
Preheat temperature min.	$T_{s \text{ min}}$	100 °C	100 °C
Preheat temperature typical	$T_{s \text{ typ}}$	120 °C	120 °C
Preheat temperature max.	$T_{s \text{ max}}$	130 °C	130 °C
Preheat time t_s from $T_{s \text{ min}}$ to $T_{s \text{ max}}$	t_s	70 seconds	70 seconds
Peak temperature	T_p	235 °C to 260 °C	245 °C to 260 °C
Time of actual peak temperature	t_p	Max. 10 seconds Max. 5 second each wave	Max. 10 seconds Max. 5 second each wave
Ramp-down rate min.		~ 2 °C/second	~ 2 °C/second
Ramp-down rate typical		~ 3.5 °C/second	~ 3.5 °C/second
Ramp-down rate max.		~ 5 °C/second	~ 5 °C/second
Time 25°C to 25°C		4 minutes	4 minutes

SOLDERING SUGGESTIONS

When solder a capacitor, heat in soldering is conducted to the element of the capacitor from wire lead and an enclosure, and hence it should be noted that soldering under high temperature and a long period may cause deterioration of breakdown of capacitors. Be sure to solder within the recommended temperature condition range.

HAND SOLDERING

- Soldering iron top temperature: $\leq 350^\circ\text{C}$
- Soldering time: $\leq 3\text{sec}$

If re-work or dipping twice is necessary, it should be done after the capacitor returned to the normal temperature.

Suggestion time is 24 hours.

THT capacitors are not suitable for reflow soldering.

When SMD components are used together with film capacitor, the film capacitor should not pass into the SMD adhesive curing oven. The film capacitor should be assembled after the SMD process.

REVISION TABLE

Revision	Date	Status	Notes
001	01/10/2021	Initial release	Initial publication

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