

Type AEB

SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C

Low Impedance and Long Life for High Voltage, High Ripple Current Applications



Type AEB capacitors are it for high voltage applications like input bus capacitors in board mounted miniature AC/DC supplies. The AEB's low impedance in ratings up to 450 Vdc, and long life, make it ideal for power supply input and other high voltage applications. The vertical, cylindrical cases make easy automatic mounting and reflow soldering.

Highlights

- +105 °C, Up to 5000 Hour Load Life
- Capacitance Range: 2.2 μ F to 100 μ F
- Voltage Range: 160 Vdc to 450 Vdc

Specifications

Operating Temperature: -25 °C to +105 °C

Rated Voltage: 160, 200, 250, 350, 400, 450 Vdc

Capacitance: 2.2 μ F to 100 μ F

Capacitance Tolerance: $\pm 20\%$ @ 120 Hz and +20 °C

Impedance Ratio (at 120 Hz):

Rated Voltage	160	200	250	350	400	450
Z(-25°C)/Z(+20°C)	2	2	3	5	6	6



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Life Test: 5000 h @ +105 °C, L — S Cases

4000 h @ +105 °C, K Case

3000 h @ +105 °C, J Case

Δ Capacitance $\pm 20\%$

DF: $\leq 200\%$ of limit

DCL: $\leq 100\%$ of limit

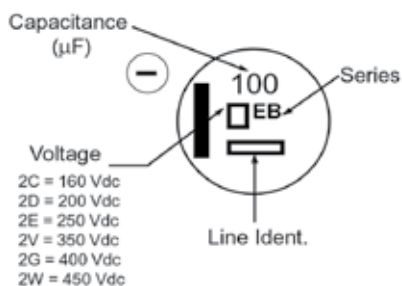
Shelf Test: 1000 h @ 105 °C

Δ Capacitance $\pm 20\%$

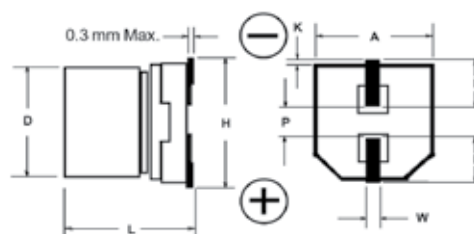
DF: $\leq 200\%$ of limit

DCL: $\leq 100\%$ of limit

AEB Series Marking



Outline Drawing



Case Dimensions

Case Code	D ± 0.5	L ± 0.5	A ± 0.2	H (max)	I (ref)	W	P (ref)	K (mm)
J	10.0	13.5	10.3	12	3.5	0.9 ± 0.2	4.6	0.7 ± 0.2
K	10.0	16.5	10.3	12	3.5	0.9 ± 0.2	4.6	0.7 ± 0.2
L	12.5	16.5	13.5	15	4.7	0.9 ± 0.3	4.4	0.7 ± 0.3
P	16.0	16.5	17.0	19	5.5	1.2 ± 0.3	6.7	0.7 ± 0.3
U	16.0	21.5	17.0	19	5.5	1.2 ± 0.3	6.7	0.7 ± 0.3
R	18.0	16.5	19.0	21	6.7	1.2 ± 0.3	6.7	0.7 ± 0.3
S	18.0	21.5	19.0	21	6.7	1.2 ± 0.3	6.7	0.7 ± 0.3

Type AEB

SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C

Ratings

Cap (µF)	Catalog Part Number	Max. DCL 2 min (µA)	Max. Dissipation Factor @ 120 Hz 20 °C	Max. Impedance @ 100 kHz 20 °C (Ω)	Max. Ripple Current @ 105 °C 100 kHz (mA)	Size (mm) D x L	Quantity Reel
160 Vdc							
10.0	AEB106M2CJ32T-F	106	0.15	3.00	70	10 x 13.5	250
33.0	AEB336M2CL32T-F	327	0.15	1.80	470	12.5 x 16.5	150
47.0	AEB476M2CP44T-F	461	0.15	1.40	600	16 x 16.5	125
68.0	AEB686M2CU44T-F	663	0.15	0.55	750	16 x 21.5	75
68.0	AEB686M2CR44T-F	663	0.15	0.80	750	18 x 16.5	125
100.0	AEB107M2CS44T-F	970	0.15	0.50	1060	18 x 21.5	75
200 Vdc							
22.0	AEB226M2DL32T-F	274	0.15	1.80	470	12.5 x 16.5	150
33.0	AEB336M2DP44T-F	406	0.15	1.40	600	16 x 16.5	125
47.0	AEB476M2DR44T-F	574	0.15	0.80	600	18 x 16.5	125
68.0	AEB686M2DU44T-F	826	0.15	0.55	750	16 x 21.5	75
100.0	AEB107M2DS44T-F	1210	0.15	0.50	1060	18 x 21.5	75
250 Vdc							
10.0	AEB106M2EK32T-F	160	0.15	2.50	88	10 x 16.5	200
22.0	AEB226M2EP44T-F	340	0.15	1.60	560	16 x 16.5	125
33.0	AEB336M2ER44T-F	505	0.15	0.85	560	18 x 16.5	125
47.0	AEB476M2EU44T-F	715	0.15	0.70	710	16 x 21.5	75
68.0	AEB686M2ES44T-F	1030	0.15	0.60	990	18 x 21.5	75
350 Vdc							
10.0	AEB106M2VP44T-F	220	0.20	3.20	270	16 x 16.5	125
22.0	AEB226M2VR44T-F	472	0.20	1.60	350	18 x 16.5	125
33.0	AEB336M2VU44T-F	703	0.20	1.20	480	16 x 21.5	75
47.0	AEB476M2VS44T-F	997	0.20	1.00	670	18 x 21.5	75
400 Vdc							
3.3	AEB335M2GJ32T-F	89	0.24	8.00	40	10 x 13.5	250
4.7	AEB475M2GK32T-F	123	0.24	5.50	50	10 x 16.5	200
10.0	AEB106M2GP44T-F	250	0.24	3.60	250	16 x 16.5	125
22.0	AEB226M2GU44T-F	538	0.24	2.20	410	16 x 21.5	75
33.0	AEB336M2GS44T-F	802	0.24	1.20	600	18 x 21.5	75
450 Vdc							
2.2	AEB225M2WJ32T-F	69	0.24	11.00	29	10 x 13.5	250
3.3	AEB335M2WK32T-F	99	0.24	7.00	41	10 x 16.5	200
4.7	AEB475M2WL32T-F	137	0.24	4.80	49	12.5 x 16.5	150
10.0	AEB106M2WR44T-F	280	0.24	3.00	310	18 x 16.5	125
22.0	AEB226M2WS44T-F	604	0.24	1.80	560	18 x 21.5	75

Part Numbering System

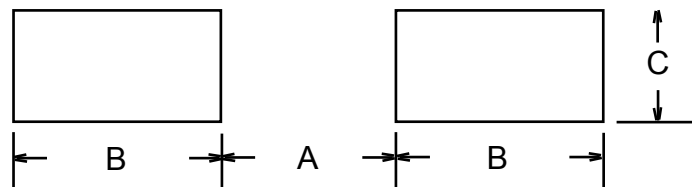
AEB	106	M	2C	J	32T	-F
Type	Capacitance	Capacitance Tolerance	Voltage Code	Case Code	Packaging Information	RoHS Compliant
	105 = 1.0 µF 106 = 10.0 µF 107 = 100.0 µF	M = ±20%	2C = 160 Vdc 2D = 200 Vdc 2E = 250 Vdc	2V = 350 Vdc 2G = 400 Vdc 2W = 450 Vdc	32 = Carrier tape Width (mm) T = Tape & Reel B = bulk	

See the Aluminum SMT Application Guide for Packaging Information.

Type AEB

SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C

Recommended Land Pattern

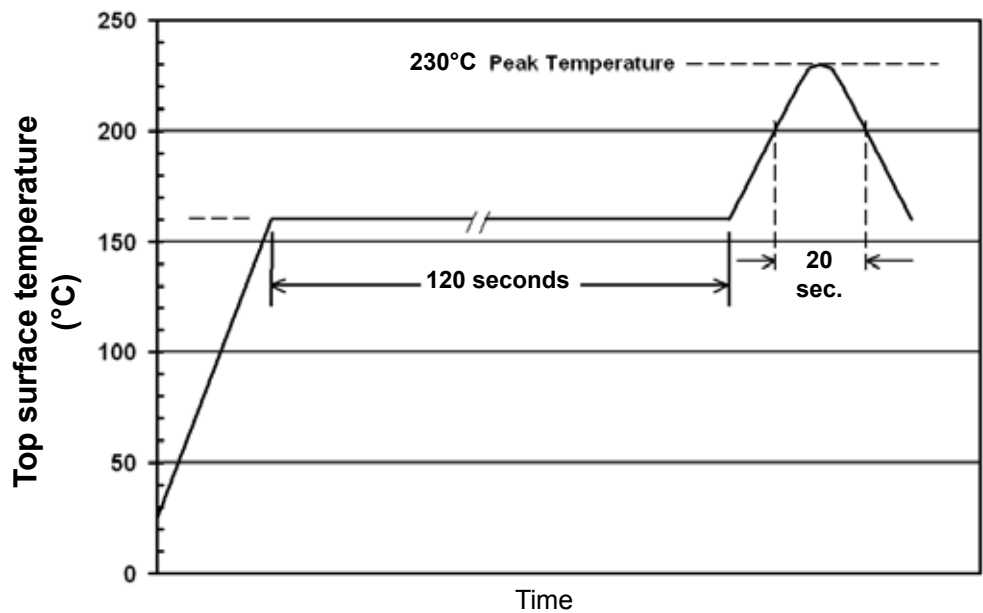


Case Code	Case Dia. (mm)	A (mm)	B (mm)	C (mm)
J	10	4.0	4.5	2.0
K	10	4.0	4.5	2.0
L	12.5	4.0	5.7	2.0
P	16	6.0	6.5	2.5
U	16	6.0	6.5	2.5
R	18	6.0	7.5	2.5
S	18	6.0	7.5	2.5

Ripple Current Correction Factor

Vdc	Ripple Current Correction Factor vs Frequency			
	120 Hz	1kHz	10kHz to 30kHz	30kHz to 100kHz
160 to 250	0.55	0.85	0.90	1.00
350 to 450	0.50	0.80	0.90	1.00

Recommended Reflow Soldering Profile for AEB Series (10 to 18 mm dia.)

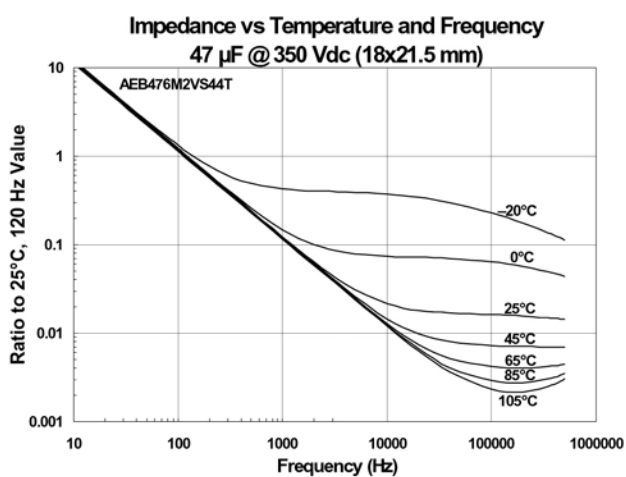
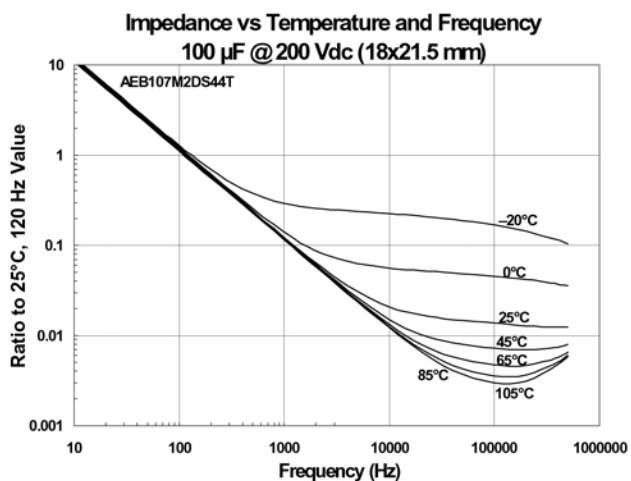
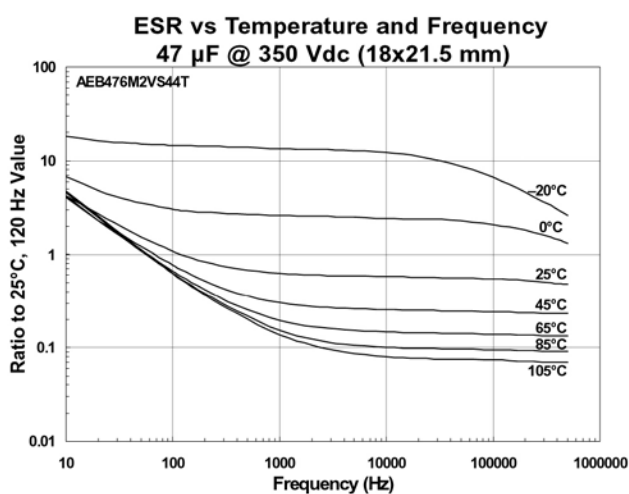
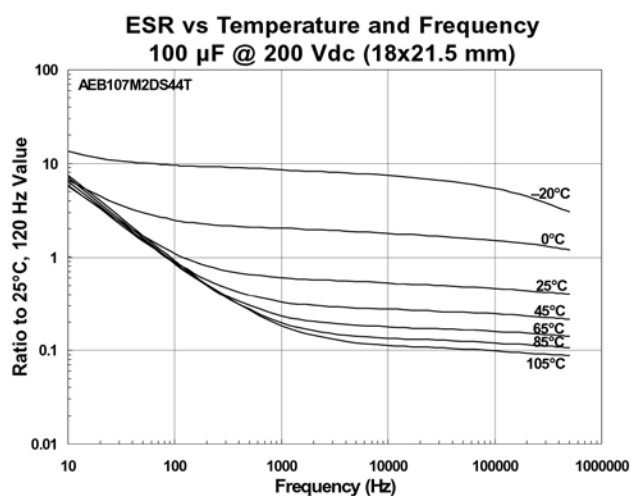
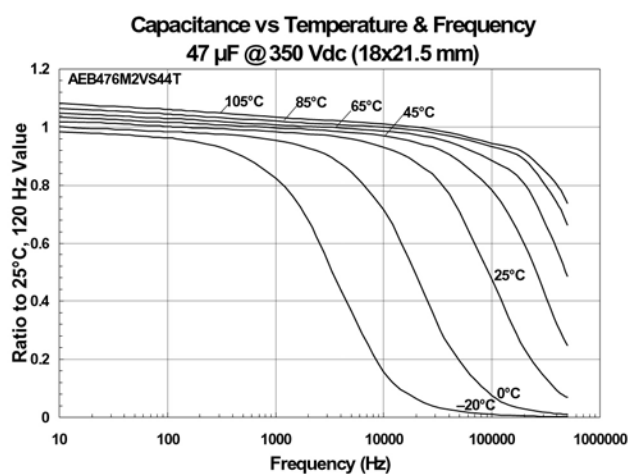
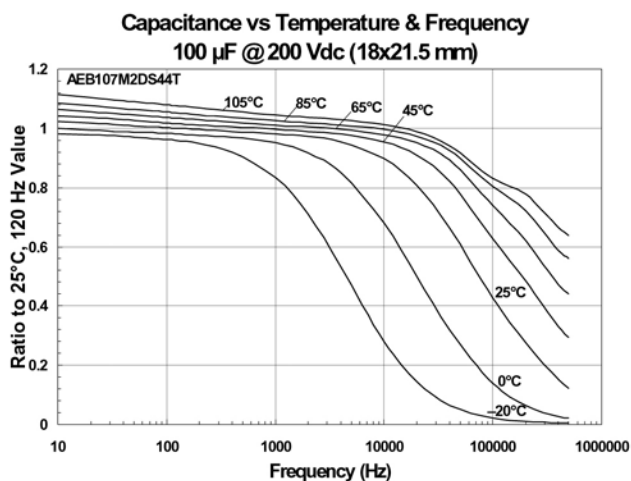


Max. top surface temperature during reflow soldering	230°C
Maximum time at peak temperature	5 seconds
Maximum time at or above 200°C	20 seconds
Number of reflow processes	1
Terminal Material	copper clad iron

Type AEB

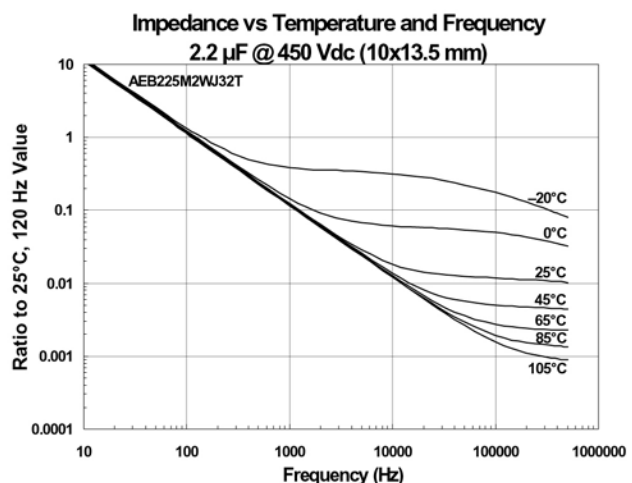
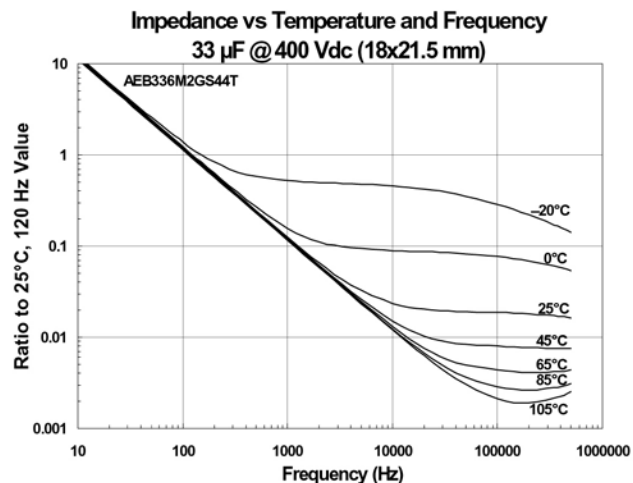
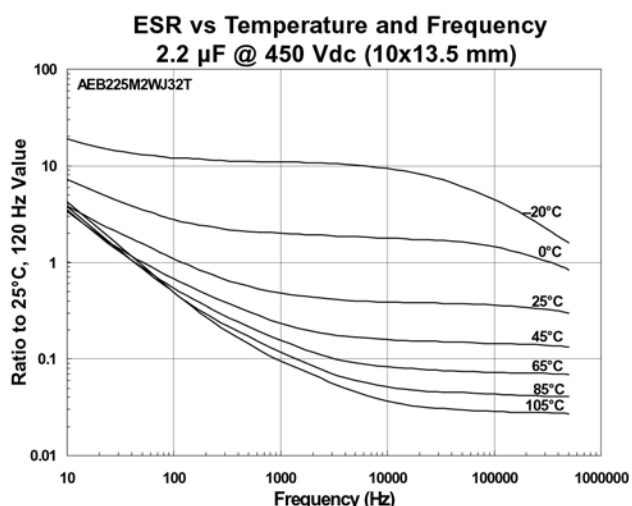
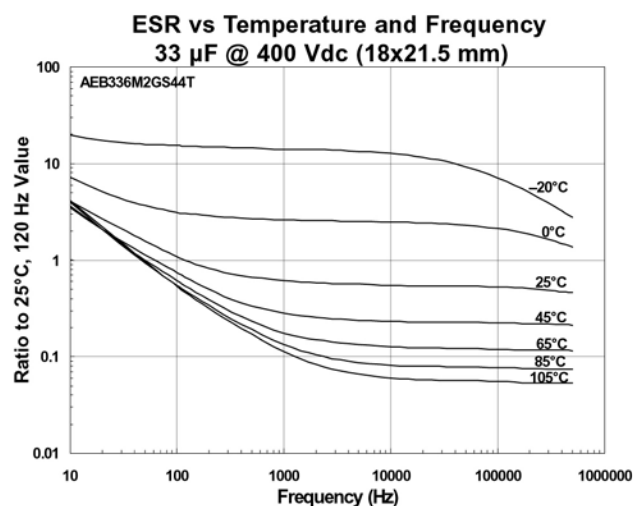
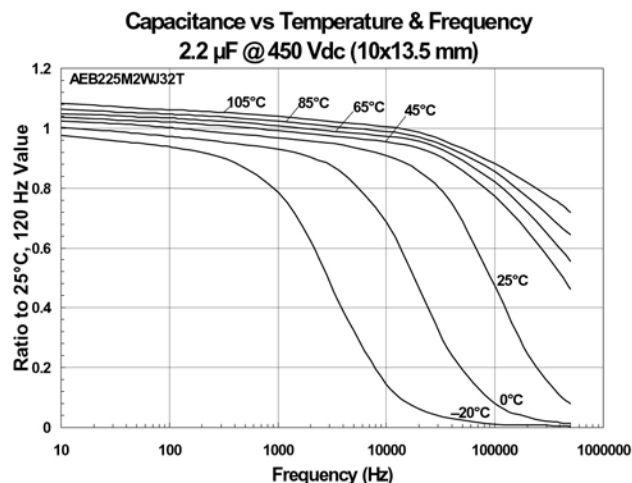
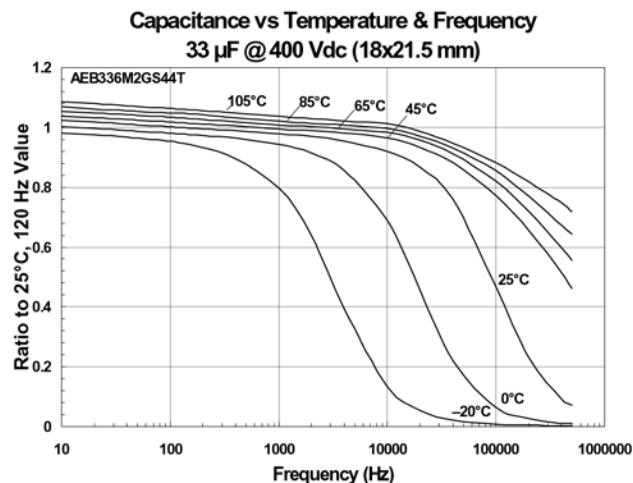
SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C

Typical Performance Curves



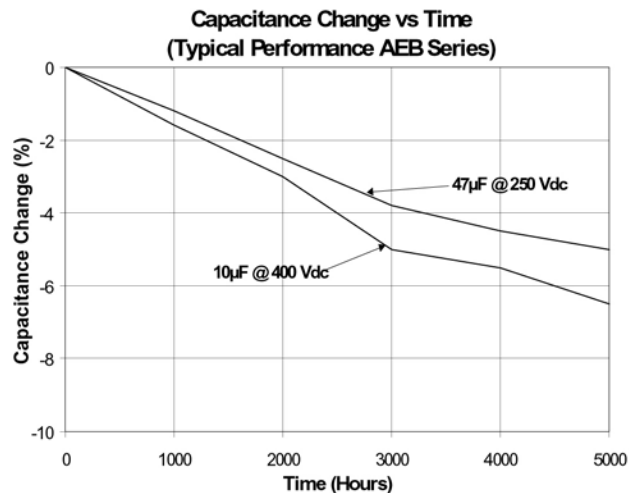
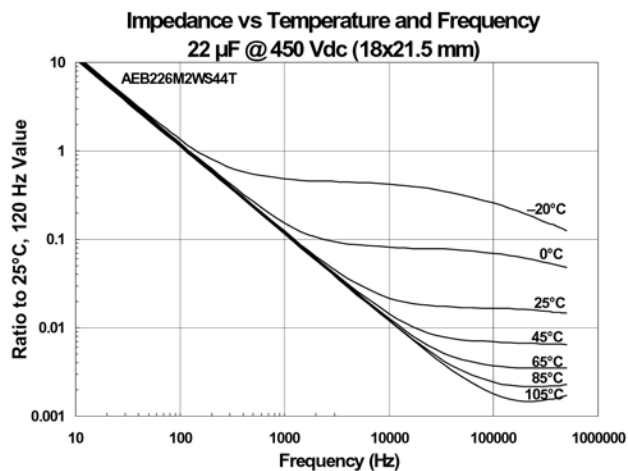
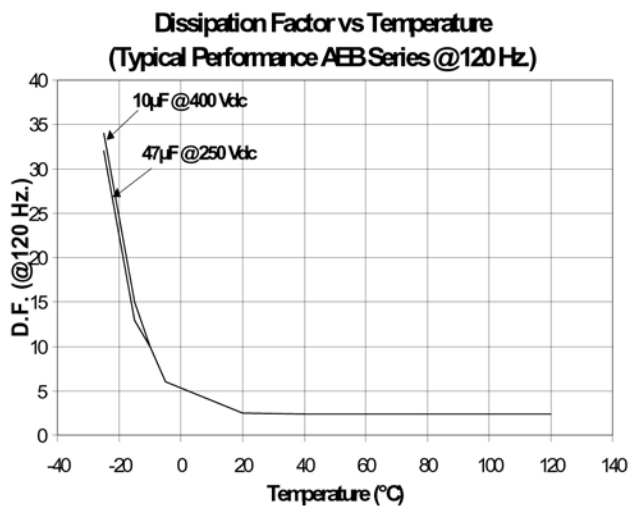
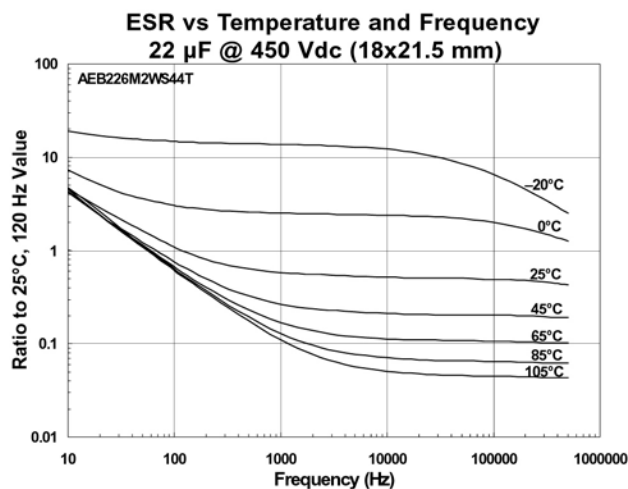
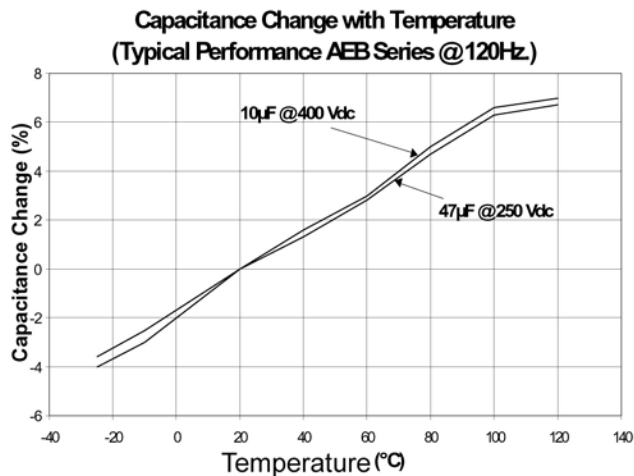
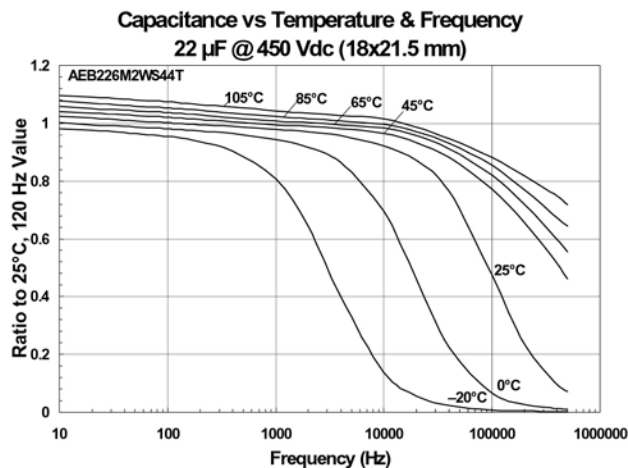
Type AEB

SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C



Type AEB

SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C



Type AEB

SMT Aluminum Electrolytic Capacitors - High Voltage, 105 °C

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.