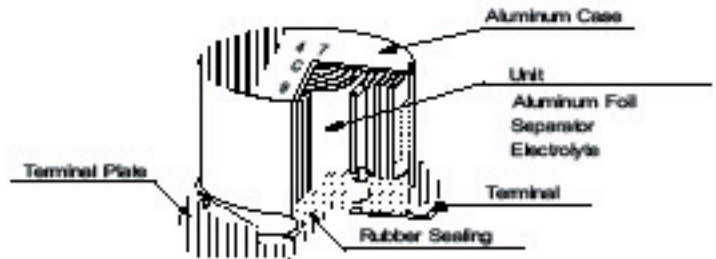


Types AEB, AFC, AFK **Material Content Declaration - Lead Free**  
 AHA, AVS **SMT Aluminum Electrolytic Capacitors**

**Material Content for RoHS Compliant Lead Free Parts**

Construction Element	Material Group	Materials	CAS if Applicable	Typical Mass (Wt. %)	ppm	Sum (%)
Active Part	Metals	Al (foil)	7429-90-5	19.23	192300	34.78
	Liquids	Gamma Butyrolactone	96-48-0	10.53	105300	
	Other	Paper	9004-34-6	5.02	50200	
Encapsulation Seal	Metals	Al (case)	742990-5	34.03	340300	48.50
	Plastics	Polyamide 6	25038-54-4	0.25	2500	
	Other	Rubber	9010-85-9	14.21	142100	
Termination (Terminal Plate)	Wire	Fe	7439-89-6	2.47	24700	16.730
		Copper Coating	7440-50-8	0.61	6100	
	Finish	(Sn + Sn3Bi*)	*7440-69-9	(0.27+*0.0017)	2717	
		or Sn	7440-31-5	or 0.2717		
Plastics	Polyphenylene Sulfide	9016-75-5	13.38	133800		



**Content, Reflow Temperatures, Case Sizes and Weight**

Lead Free Product	
CDE Part Number	Add -F at end of P/N
Rubber Sealing	Synthetic Rubber with high modulus of elasticity
Aluminum Case	Aluminum with high modulus of elasticity
Terminal	Tinned Copper-clad Steel Wire
Terminal finish	Tin and Bismuth Sn + Sn3Bi
Separator	Manila Hemp
Anode Foil	High Purity Aluminum Foil
Cathode Foil	Aluminum Foil
Electrolyte	Organic Solvent
Terminal Plate	Thermo-plastic resin
Initial Characteristic	Same
Life Characteristic	Same
Peak Temperature	≤ 5 s @ 250 °C (3 - 6.3 mm Dia.) ≤ 5 s @ 235 °C (8 - 18 mm Dia.)
Reflow Temperature	≤ 60 s @ 200 °C (3 - 18 mm Dia.)
Backward Compatible	Yes
MSL Level	N/A

Case Code	Case Size D x L (mm)	Weight (g)
A	3.0 x 5.4	0.08
B	4.0 x 5.4**	0.12
C	5.0 x 5.4**	0.20
D	6.3 x 5.4**	0.30
X	6.3 x 7.9	0.44
E	8.0 x 6.2	0.52
F	8.0 x 10.2	0.88
G	10.0 x 10.2	1.29
H	12.5 x 13.5	2.49
J	10.0 x 13.5	1.43
K	10.0 x 16.5	1.89
L	12.5 x 16.5	2.87
P	16.0 x 16.5	5.31
R	18.0 x 16.5	6.98
S	18.0 x 21.5	7.87
U	16.0 x 21.5	6.22

No (Bi) in shaded area

\*\* 5.8 ±.3 for AFK

To the best of our knowledge, the information provided on the enclosed is correct as of the date indicated on the document. Since some of the information is provided by the acceptance of data from sources outside of Cornell Dubilier Electronics, we can not guarantee that all is complete and accurate. 030309