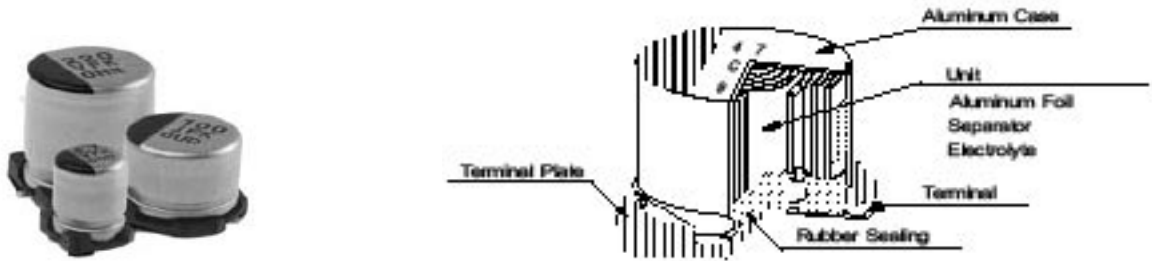


Types AEB, AFC, AFK Material Content Declaration - Lead Free AHA, AHD, AVS SMT Aluminum Electrolytic Capacitors

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	22.3	223000	38.2
	Liquids	Ethylene Glycol Gamma Butyrolactone	25322-68-3 96-48-0	11.0	110000	
	Other	Paper		4.9	49000	
Encapsulation (Cover Disk)	Metals	Al (case)	742990-5	30.3	303000	47.9
	Plastics	Polyamide 6	25038-54-4	0.2	2000	
	Other	Rubber		17.4	174000	
Termination (Terminal Plate)	Metals	Fe (Sn + Sn/3Bi) coated wire	7439-89-6	2.6	26000	13.9
	Plastics	PPS		11.3	113000	



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 + Sn/3Bi
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

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

** 5.8 ± .3 for AFK and AHD

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

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