



**european space agency
agence spatiale européenne**

Certificate of Qualification No. 109N


This is to certify that AVX/TPC, St Apollinaire, France has been qualified by ESA for the supply of Capacitors, Ceramic, Fixed, Chip, Type I for use in ESA space programmes, according to ESCC Generic Specification 3009 and associated Detail Specifications (see QPL sheet) as recommended by the Space Components Steering Board.

This certificate is valid until June 2019.

A handwritten signature in blue ink, appearing to be 'J. D.' or similar, located below the validity text.

**Head of the Product Assurance
and Safety Department**

**Date
20 April 2017**

Types covered by similarity: Tolerance (±): 0.5pF; 2, 5, 20%					Remarks: Variant 01 removed			
Procurement Specifications				Manufacturer		Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 3009 Detail ESCC 3009/003 3009/004 3009/005 3009/006 3009/022				AVX/TPC St Apollinaire France		Qualification	CNES	Feb 1983
Characteristics: Operating Temp. Range (°C), -55 to +125 Variants 03 and 06 are qualified Values covered by ESCC Specifications defined below.								
Style	Model	Detail Spec.	Variants	Capacitance Range (pF)	Rated Volt. (V)	Tolerance (±%)	TC (ppm/°C)	
0805	A_12C	3009/003	03, 06	4.7 to 9.1 10 to 1 500	50, 100 50, 100	0.5pF 1, 2, 5, 10	±30	
1206	A_20C	3009/022	03, 06	10 to 3 900	50, 100	1, 2, 5, 10	±30	
1210	A_13C	3009/004	03, 06	22 to 6 800 8 200 to 10 000	50, 100 50	1, 2, 5, 10	±30	
1812	A_14C	3009/005	03, 06	100 to 15 000	50, 100	1, 2, 5, 10	±30	
2220	A_15C	3009/006	03, 06	470 to 33 000	50, 100	1, 2, 5, 10	±30	
			CAPACITORS, CERAMIC, FIXED, CHIP, TYPE I			Certificate 109 N		Page 01-02 001-1