IEC 60384-21

(First edition – 2004-06)

Fixed capacitors for use in electronic equipment –

Part 21: Sectional specification: Fixed surface mount multilayer capacitors of ceramic dielectric, Class 1

CORRIGENDUM 1

Page 8

1.5.6
rated voltage (DC)

Replace, in the note, 'AC' *by* 'a.c.'.

Page 8

1.5.6
rated voltage (DC)

Replace, in the title and text, 'DC' *by* 'd.c.'.

Page 9

1.6.1

Replace, in item b), 'DC' *by* 'd.c.'.

Page 12

Table 3 – Combination of temperature coefficient and tolerance

Replace the sixth and seventh rows beneath the column headers:

-220	±30(G)	14,3 / 25,6	11,4 / 20,46	8,58 / 15,3	5,72 / 10,2	–12,5 / –9,50	–16,2 / –12,4	–20,0 / –15,2	–26,3 / –20,0
-330	±60(H)	20,3 / 38,4	16,2 / 30,7	12,2 / 23,0	8,12 / 15,4	–19,5 / – 13,5	–25,4 / –17,6	–31,2 / –21,6	–41,0 / –28,4

by the following:

-220	±30(G)	14,3 / 25,6	11,4 / 20,46	8,55 / 15,3	5,70 / 10,2	–12,5 / –9,50	–16,2 / –12,4	–20,0 / –15,2	–26,3 / –20,0
-330	±60(H)	20,3 / 38,4	16,2 / 30,7	12,2 / 23,0	8,10 / 15,4	–19,5 / –13,5	–25,4 / –17,6	–31,2 / –21,6	–41,0 / –28,4

Page 15

Table 4 – Fixed sample size test plan for qualification approval – Assessment level EZ

Replace the column headers by the following:

Group No.	Test	Subclause of this publication	Number of specimens n [e]	Permissible number of non conforming items c

Page 16

Table 5 – Tests schedule for qualification approval

Replace GROUP 1A by the following:

GROUP 1A		D		See Table 4	
4.15	Robustness of terminations (if applicable)		Test Ua1, Force: 2.5 N Test Ub, Method 1, Force: 2.5 N Number of bends: 1 Visual examination		No visible damage
4.9.1	Initial measurement		Capacitance		
4.9	Resistance to soldering heat		See detail specification for the method Recovery: 6 h to 24 h		
4.9.4	Final measurement		Visual examination Capacitance		As in 4.9.4 As in 4.9.4
4.16	Component solvent resistance (if applicable)		Solvent: ... Solvent temperature: ... Method 2 Recovery: ...		See detail specification

Replace the existing text of page 17 by the following:

Subclause number and test (see NOTE 1)	D or ND	Conditions of test (see NOTE 1)	Number of specimens (n) and number of non-conforming items (c)	Performance requirements (see NOTE 1)
GROUP 2	D		See Table 4	
4.8 Substrate bending test		Deflection: ...		See detail specification
		Number of bends: ...		
4.8.1 Initial measurement		Capacitance		
4.8.2 Final inspection		Capacitance (with printed board in bent position)		$\lvert\Delta C/C\rvert \leq 5$ %
		Visual examination		No visible damage
GROUP 3	D		See Table 4	
4.3 Mounting		Substrate material: ...[b]		
		Visual examination		As in 4.4.2
		Capacitance		Within specified tolerance
		Tangent of loss angle		As in 4.5.2
		Insulation resistance		As in 4.5.3.3
		Voltage proof		No breakdown or flashover
GROUP 3.1	D		See Table 4	
4.7 Shear test		Visual examination		No visible damage
4.11.1 Initial measurement		Capacitance		
4.11 Rapid change of temperature		T_A = Lower category temperature		
		T_B = Upper category temperature		
		Five cycles		
		Duration t_1= 30 min		
		Recovery: 6 h to 24 h		
4.11.4 Final measurements		Visual examination		No visible damage
		Capacitance		$\Delta C/C$ as in 4.11.4
4.12 Climatic sequence				
4.12.1 Initial Measurement		Capacitance		
4.12.2 Dry heat		Temperature: upper category temperature		
		Duration: 16 h		
4.12.3 Damp heat, cyclic, test Db, first cycle				
4.12.4 Cold		Temperature: lower category temperature		
		Duration: 2 h		
		Visual examination		No visible damage

Page 21

4.3 Visual examination and check of dimensions

Replace the title of 4.3 by the following new title:

4.3 Mounting

Page 21

4.4 Mounting

Replace the title of 4.4 by the following new title:

4.4 Visual examination and check of dimensions

Page 30

Table 13 – Final inspection measurements and requirements

Replace the third row after the column headers by the following:

Insulation resistance	Subclause 4.5.3	All α's and Subclasses	Ri ≥2 500 MΩ or Ri × C_R ≥ 25 s (**)

Page 30

4.13 Damp heat, steady state

Renumber the Subclauses within 4.13 consecutively from 4.13.1 to 4.13.4.

Page 31

Table 14 – Final inspection measurements and requirements

Replace the third row after the column headers by the following:

Insulation resistance	Subclause 4.5.3	All α's and subclasses	Ri ≥2 500 MΩ or Ri × C_R ≥ 25 s (**)