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# CAPACITOR FILTERS, C-TYPE, FEEDTHROUGH, ELECTROMAGNETIC INTERFERENCE SUPPRESSION, HERMETICALLY SEALED, BASED ON TYPE SFC100

ESCC Detail Specification No. 3008/027

ISSUE 2 April 2003



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# **DOCUMENTATION CHANGE NOTICE**

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19	Specification upissued to incorporate editorial and technical changes per DCR.



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### 1. GENERAL

### 1.1 <u>SCOPE</u>

This specification details the ratings, physical and electrical characteristics, test and inspection data for a Capacitor Filter, C-Type, Feedthrough, Electromagnetic Interference Suppression, Hermetically Sealed, based on Type SFC100. It shall be read in conjunction with ESCC Generic Specification No. 3008, the requirements of which are supplemented herein.

# 1.2 COMPONENT TYPE VARIANTS AND RANGE OF COMPONENTS

Variants of the basic type capacitor filters and the range of components covered by this specification, are given in Table 1(a).

### 1.3 MAXIMUM RATINGS

The maximum ratings, which shall not be exceeded at any time during use or storage, applicable to the capacitor filters specified herein, are as scheduled in Table 1(b).

### 1.4 PARAMETER DERATING INFORMATION

The parameter derating information applicable to the capacitor filters specified herein, is shown in Figure 1.

### 1.5 PHYSICAL DIMENSIONS

The physical dimensions of the capacitor filters specified herein, are shown in Figure 2.

# 1.6 FUNCTIONAL DIAGRAM

The functional diagram, showing lead identification, of the capacitor filters specified herein, is shown in Figure 3.

# 2. APPLICABLE DOCUMENTS

The following documents form part of this specification and shall be read in conjunction with it:

- (a) ESCC Generic Specification No. 3008 for Capacitors and Capacitor Filters, Feedthrough.
- (b) MIL-STD-202, Test Methods for Electronic and Electrical Component Parts.

# 3. TERMS, DEFINITIONS, ABBREVIATIONS, SYMBOLS AND UNITS

For the purpose of this specification, the terms, definitions, abbreviations, symbols and units specified in ESCC Basic Specification No. 21300 shall apply. In addition, the following abbreviations are used:-

V<sub>T</sub> = Test Voltage.



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# TABLE 1(a) - TYPE VARIANTS AND RANGE OF COMPONENTS

(1) Variant (Notes 1 and 2)	(2) Rated Voltage U <sub>R</sub> (V)		(3) Capacitance Range	(4) Voltage Proof VP	(5) Voltage Drop	(6) DC Resistance	(7) Rated Current
anu z)	(a) - 55°C/ + 85°C	(b) +85°C/ +125°C	(pF) (±20%) (E6 Series)	(V)	V <sub>dr</sub> (V)	Rs (mΩ)	¹R (A)
01, 04	50	25	1000 to 10 <sup>6</sup>	125	0.1	10	10
02, 05	100	75	1000 to 330000	250	0.1	10	10
03, 06	200	150	1000 to 150000	500	0.1	10	10

# **NOTES**

- See Insertion Loss requirements in the following Table.
   See the Table below and Figure 2 for physical characteristics.

VARIANT	CASE THREAD E
01 to 03	U: 1/4 28 UNF
04 to 06	I: M6×0.75

# INSERTION LOSS VALUES ACCORDING TO THE CAPACITANCE VALUE

	DENTION EGG					
(8) Capacitance (pF)			Insertion Lo	oss (I <sub>L</sub> ) (dB)		(9)
(E6 Series)	100kHz	1.0MHz	10MHz	100MHz	1.0GHz	10GHz
1000	_	-	•	21	41	61
1500	-	-	-	24	44	64
2200	-	-	-	27	48	68
3300	-	-	11	31	52	70
4700	-	-	14	34	54	70
6800	-	-	17	37	57	70
10000	-	-	21	41	61	70
15000	-	-	25	45	- 65	70
22000	-	8	28	48	68	70
33000	-	11	31	51	70	-
47000	-	14	34	48	70	-
68000	-	17	33	45	70	-
100000	-	21	41	50	70	_
150000	-	25	45	52	70	-
220000	8	28	48	65	70	-
330000	11	31	51	70	70	_
470000	15	35	53	70	-	-
680000	18	38	55	70	-	-
1000000	21	41	55	70	-	-



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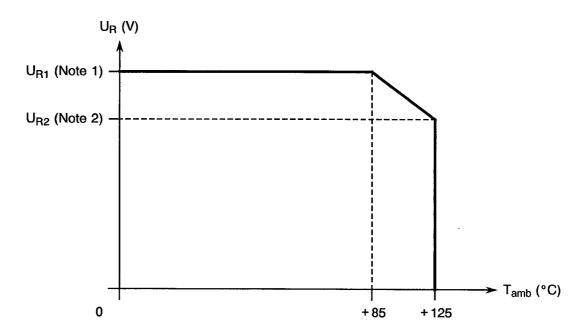
# **TABLE 1(b) - MAXIMUM RATINGS**

No.	Characteristic	Symbol	Maximum Ratings	Unit	Remarks
1	Rated DC Voltage	U <sub>R</sub>	See Table 1(a) Column 2	V	Notes 1 and 2
2	Voltage Drop	V <sub>dr</sub>	100	mV	
3	DC Resistance	Rs	10	mΩ	
4	Rated Current	I <sub>R</sub>	10	Α	Note 3
5	Torque	T <sub>qe</sub>	0.8	Nm	
6	Operating Temperature Range	T <sub>op</sub>	-55 to +125	°C	T <sub>amb</sub>
7	Storage Temperature Range	T <sub>stg</sub>	-55 to +125	°C	
8	Soldering Temperature	T <sub>sol</sub>	+ 260	°C	Note 4

#### **NOTES**

- 1. At  $T_{amb} \le +85$ °C. For derating at  $T_{amb} > +85$ °C, see Figure 1.
- 2. The addition of DC applied voltage and ripple voltage shall never exceed the rated DC voltage.
- 3. DC and low frequency.
- 4. Duration 10 seconds maximum at a distance of not less than 2.0mm from the device body and the same lead shall not be resoldered until 3 minutes have elapsed.

# **FIGURE 1 - PARAMETER DERATING INFORMATION**



Rated Voltage versus Temperature

- 1. See U<sub>R1</sub> Voltage value for each variant on Table 1(a), Column 2(a).
- 2. See U<sub>R2</sub> Voltage value for each variant on Table 1(a), Column 2(b).

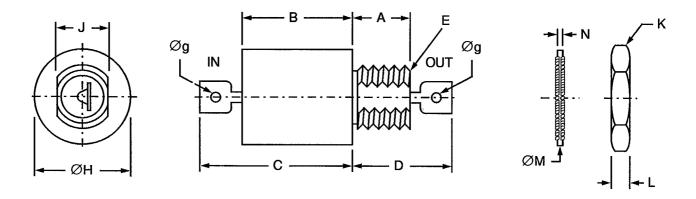


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# **FIGURE 2 - PHYSICAL DIMENSIONS**

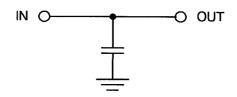


	Variants	01 to 03	Variants	04 to 06	
Symbol	Millimetres		Millimetres		Notes
	Min.	Max.	Min.	Max.	
Α	5.10	5.20	5.10	5.20	
В	4.50	5.30	4.50	5.30	1
С	7.00	9.30	7.00	9.30	1, 2
D	7.00	9.00	7.00	9.00	1, 2
E	See Ta	See Table 1(a)		ole 1(a)	Thread
Øg	1.5	50	1.50		
ØН	9.70	9.90	9.70	9.90	
J	4.90	5.10	4.90	5.10	
K	8.00 NOM.		8.00 NOM.		Across flats
L	2.50 NOM.		2.50 NOM.		
ØM	10.20 NOM.		9.40 NOM.		3
N	0.60 NOM.		0.40 NOM.		3

# **NOTES**

- 1. Lead finish shall commence not more than 1.5mm from encapsulant.
- The terminals are defined as rigid.
- 3. Internal fan lockwasher.

# **FIGURE 3 - FUNCTIONAL DIAGRAM**





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#### 4. REQUIREMENTS

#### 4.1 GENERAL

The complete requirements for procurement of the components specified herein are stated in this specification and ESCC Generic Specification No. 3008 for Capacitors and Capacitor Filters, Feedthrough. Deviations from the Generic Specification, applicable to this specification only, are detailed in Para. 4.2.

Deviations from the applicable Generic Specification and this Detail Specification, formally agreed with specific Manufacturers on the basis that the alternative requirements are equivalent to the ESCC requirements and do not affect the components' reliability, are listed in the appendices attached to this specification.

### 4.2 DEVIATIONS FROM GENERIC SPECIFICATION

# 4.2.1 <u>Deviations from Special In-process Controls</u>

None.

# 4.2.2 <u>Deviations from Final Production Tests (Chart II)</u>

(a) Para. 9.7, External Visual Inspection: For variants with a silver plated case, a change of shade is acceptable.

## 4.2.3 Deviations from Burn-in and Electrical Measurements (Chart III)

(a) Para. 9.7, External Visual Inspection: For variants with a silver plated case, a change of shade is acceptable.

# 4.2.4 <u>Deviations from Qualification Tests (Chart IV)</u>

- (a) Para. 9.7, External Visual Inspection: For variants with a silver plated case, a change of shade is acceptable.
- (b) Para. 9.19, Operating Life: At intermediate and final measurements, Insertion Loss shall not be performed.

# 4.2.5 <u>Deviations from Lot Acceptance Tests (Chart V)</u>

- (a) Para. 9.7, External Visual Inspection: For variants with a silver plated case, a change of shade is acceptable.
- (b) Para. 9.19, Operating Life: At intermediate and final measurements, Insertion Loss shall not be performed.

# 4.3 <u>MECHANICAL REQUIREMENTS</u>

## 4.3.1 <u>Dimension Check</u>

The dimensions of the components specified herein shall be verified in accordance with the requirements set out in Para. 9.5 of ESCC Generic Specification No. 3008 and they shall conform to those shown in Figure 2 of this specification.

# 4.3.2 Weight

The maximum weight of the components specified herein shall be 7.0 grammes.

## 4.3.3 Robustness of Terminations

The requirements for the robustness of terminations tests are specified in Section 9 of ESCC Generic Specification No. 3008. The leads are defined as "Rigid".

- Test Ua1, Tensile : The load shall be 20N.



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#### 4.3.4 Solderability

The requirements for solderability testing are specified in Section 9 of ESCC Generic Specification No. 3008.

Test Method 1 shall apply and a thermal screen of 1.6mm may be used. The terminal shall be immersed up to the terminal slot which shall be fully filled.

#### 4.3.5 **Seal Test**

The requirements for seal testing are specified in Section 9 of ESCC Generic Specification No. 3008.

The limit for fine leak shall be 5.10<sup>-3</sup> Pa.cm<sup>3</sup>/s [5.10<sup>-8</sup> bar.cm<sup>3</sup>/s].

#### 4.4 MATERIALS AND FINISHES

The materials and finishes shall be as specified herein. Where a definite material is not specified, a material which will enable the components specified herein to meet the performance requirements of this specification shall be used. Acceptance or approval of any constituent material does not guarantee acceptance of the finished product.

#### 4.4.1 Case

The case shall be silver plated brass and hermetically sealed with hard glass seals.

#### 4.4.2 Lead Material and Finish

The lead material shall be Type 'G' with Type '3 or 4' finish in accordance with the requirements of ESCC Basic Specification No. 23500.

#### 4.4.3 **Accessories**

Nut

: As per Figure 2, brass, silver-plated.

Lock-Washer: As per Figure 2, bronze, silver-plated.

#### 4.5 **MARKING**

#### 4.5.1 General

The marking of components delivered to this specification shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and the following paragraphs. When the component is too small to accommodate all of the marking specified, as much as space permits shall be marked and the marking information, in full, shall accompany the component in its primary package.

The information to be marked and the order of precedence, shall be as follows:-

- (a) Lead Identification.
- (b) The ESCC Component Number.
- (c) Electrical Characteristics and Ratings.
- (d) Traceability Information.



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Not applicable.

# 4.5.3 The ESCC Component Number

The ESCC Component Number shall be constituted and marked as follows:-

	<u>300802701</u>	₿
Detail Specification Number		١
Type Variant (see Table 1(a))		١
Testing Level (B or C, as applicable)		

# 4.5.4 <u>Electrical Characteristics and Ratings</u>

The electrical characteristics and ratings to be marked in the following order of precedence are:-

- (a) Capacitance Value.
- (b) Tolerance.
- (c) Rated Voltage.

The information shall be constituted and marked as follows:-

	<u>683</u> M⊑
Capacitance Value (68nF)	
Tolerance (±20%)	
Rated Voltage (100V)	

### 4.5.4.1 Capacitance Values

The capacitance values shall be expressed by means of the following codes. The unit quantity for marking shall be picofarads (pF).

Capacitance Value (pF)	Code
XX10 <sup>1</sup>	XX1
XX10 <sup>2</sup>	XX2
XX10 <sup>3</sup>	XX3
XX10 <sup>4</sup>	XX4
XX10 <sup>5</sup>	XX5

# 4.5.4.2 Tolerance

The tolerance on capacitance values shall be indicated by the code letters specified hereafter.

Tolerance (±%)	Code Letter
20	М



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# 4.5.4.3 Rated Voltage

The rated voltage shall be indicated by the code letters specified hereafter.

Rated Voltage (U <sub>R</sub> ) (V)	Code Letter
50	С
100	E
200	G

# 4.5.5 <u>Traceability Information</u>

Each component shall be marked in respect of traceability information in accordance with the requirements of ESCC Basic Specification No. 21700.

### 4.6 <u>ELECTRICAL MEASUREMENTS</u>

# 4.6.1 <u>Electrical Measurements at Room Temperature</u>

The parameters to be measured at room temperature are scheduled in Table 2. Unless otherwise specified, measurements shall be performed at  $T_{amb} = +22 \pm 3$  °C.

# 4.6.2 <u>Electrical Measurements at High and Low Temperatures</u>

The parameters to be measured at high and low temperatures are scheduled in Table 3. Measurements shall be performed at  $T_{amb} = 125(+0-5)$  °C and -55(+5-0) °C respectively.

# 4.6.3 <u>Circuits for Electrical Measurements (Figure 4)</u>

Not applicable.

# 4.7 BURN-IN TESTS

### 4.7.1 Parameter Drift Values

The parameter drift values applicable to burn-in are as specified in Table 4 of this specification. Unless otherwise stated, measurements shall be performed at  $T_{amb} = +22\pm3$  °C. The parameter drift values ( $\Delta$ ) applicable to the parameters scheduled shall not be exceeded. In addition to these drift value requirements for a given parameter, the appropriate limit values specified in Table 2 shall not be exceeded.

# 4.7.2 Conditions for Burn-in

The requirements for burn-in are specified in Section 7 of ESCC Generic Specification No. 3008. The conditions for burn-in shall be as specified in Table 5(a) of this specification.

# 4.7.3 <u>Electrical Circuit</u> for Burn-in (Figure 5)

Not applicable.



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# TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE - DC PARAMETERS

No. Characteristic	Characteristics	Symbol	ESCC 3008	Test	Lin	Unit		
No. Characteristics		Test Method		Conditions	Min	Max	Offic	
1	Voltage Drop	V <sub>dr</sub>	Para. 9.4.1.5	I <sub>R</sub> = 10A	-	0.1	٧	
2	Voltage Proof	VP	Para. 9.4.1.2	V=2.5U <sub>R</sub>	Note 1	-	٧	
3	Insulation Resistance	Ri Ri×C	Para. 9.4.1.3	C≤25nF C>25nF	10 <sup>4</sup> 250	-	MΩ sec	

# **NOTES**

1. See Column 4 of Table 1(a).

TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE - AC PARAMETERS

No. Characteris	Characteristics	Symbol	ESCC 3008	Test	Lin	Lloit		
140.	Orial acteristics	Symbol	Test Method	Conditions	Min	Max	Unit	
4	Insertion Loss	I <sub>L1</sub>	Para. 9.4.1.4	f=100kHz Note 1	Note 2		dB	
5	Insertion Loss	l <sub>L2</sub>	Para. 9.4.1.4	f = 1.0MHz Note 3	Note 2	1	dB	
6	Insertion Loss	l <sub>L3</sub>	Para. 9.4.1.4	f = 10MHz Note 3	Note 2	-	dB	
7	Insertion Loss	l <sub>L4</sub>	Para. 9.4.1.4	f = 100MHz Note 3	Note 2	-	dB	
8	Insertion Loss	l <sub>L5</sub>	Para. 9.4.1.4	f = 1.0GHz Note 3	Note 2	-	dB	
9	Insertion Loss	I <sub>L6</sub>	Para. 9.4.1.4	f=10GHz Note 1	Note 2	-	dB	
10	Capacitance	С	Para. 9.4.1.1	Para. 9.4.1.1	Note 4	-	pF	

- 1. Measurements at this frequency to be made only during Chart IV testing.
- 2. See Column 9 of Table 1(a).
- 3. Measurements at rated current to be made only during Chart IV testing in Subgroups II or III. Measurements without load current to be made during Charts II, III and V.
- 4. See Column 3 of Table 1(a).



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# TABLE 3 - ELECTRICAL MEASUREMENTS AT HIGH AND LOW TEMPERATURES

No	No. Characteristics Symbol	Symbol	ESCC 3008		Lin	Ulmit	
		Oymbor	Test Method		Min	Max	Unit
3	Insulation Resistance	Ri Ri×C	Para. 9.4.1.3	C≤25nF C>25nF Note 2	10 <sup>3</sup> 25	-	MΩ sec
10	Capacitance Change	<u>ΔC</u> C	Para. 9.4.1.1	Para. 9.4.1.1	-20	+20	% (3)

- 1. If more than 20 units have to be measured, the measurement shall be performed on a sample basis in accordance with Inspection Level I, Table IIA, AQL = 1.0% of IEC Publication No. 410.
- 2. Insulation resistance is to be performed only at high temperature.
- 3. Relative to the value measured in Table 2.



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# FIGURE 4 - CIRCUITS FOR ELECTRICAL MEASUREMENTS

Not applicable.

# **TABLE 4 - PARAMETER DRIFT VALUES**

No.	Characteristics	Symbol	Spec. and/or Test Method	Test Conditions	Change Limits (Δ)	Unit
10	Capacitance Change	<u>ΔC</u> C	As per Table 2	As per Table 2	± 10	%

# TABLE 5(a) - CONDITIONS FOR BURN-IN TEST

No.	Characteristic	Symbol	Condition	Unit
1	Ambient Temperature	T <sub>amb</sub>	+ 125( + 0 - 3)	°C
2	Test Voltage	V <sub>T</sub>	2×U <sub>R</sub> at +125°C Note 1	V

### **NOTES**

1. Applied between one terminal and the case. See Column 2(b) of Table 1(a) for value of UR.

# TABLE 5(b) - CONDITIONS FOR OPERATING LIFE TEST

No.	Characteristic Symbol Condition		Condition	Unit
1	Ambient Temperature	T <sub>amb</sub>	+ 125( + 0 - 3)	°C
2	Test Voltage	uge V <sub>T</sub> 2×U <sub>R</sub> at +125°C Note 1		V
3	Rated Current	I <sub>R</sub>	10 Note 2	Α

#### **NOTES**

- 1. Applied between one terminal and the case. See Column 2(b) of Table 1(a) for value of UR.
- 2. To flow between the terminals.

# FIGURE 5 - ELECTRICAL CIRCUIT FOR BURN-IN AND OPERATING LIFE TESTS

Not applicable.



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# 4.8 <u>ENVIRONMENTAL AND ENDURANCE TESTS (CHARTS IV AND V OF ESCC GENERIC SPECIFICATION No. 3008)</u>

# 4.8.1 Measurements and Inspections on Completion of Environmental Tests

The parameters to be measured and inspections to be performed on completion of environmental tests are scheduled in Table 6. Unless otherwise stated, the measurements shall be performed at  $T_{amb} = +22\pm3$  °C.

# 4.8.2 Measurements and Inspections at Intermediate Points During Endurance Tests

The parameters to be measured and inspections to be performed at intermediate points during endurance tests are scheduled in Table 6. Unless otherwise stated, the measurements shall be performed at  $T_{amt} = +22\pm3$  °C.

## 4.8.3 <u>Measurements and Inspections on Completion of Endurance Tests</u>

The parameters to be measured and inspections to be performed on completion of endurance testing are as scheduled in Table 6. Unless otherwise stated, the measurements shall be performed at  $T_{amb} = +22\pm3$  °C.

# 4.8.4 Conditions for Operating Life Test (Part of Endurance Testing)

The requirements for operating life test are specified in Section 9 of ESCC Generic Specification No. 3008. The conditions for operating life testing shall be as specified in Table 5(b) of this specification.

### 4.8.5 <u>Electrical Circuit for Operating Life Test (Figure 5)</u>

Not applicable.



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# TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL TESTS AND AT INTERMEDIATE POINTS AND ON COMPLETION OF ENDURANCE TESTING

	ESCC GENERIC SF	PEC. NO. 3008	MEASUREMENTS	AND INSPECTIONS		LIMI	TS	
NO.	ENVIRONMENTAL AND ENDURANCE TESTS (1)	TEST METHOD AND CONDITIONS	IDENTIFICATION	CONDITIONS	SYMBOL	MIN.	MAX.	UNIT
01	Seal Test (Hermetically Sealed)	Para. 9.6 and Para. 4.3.5 of this spec.	Gross Leak Fine Leak	ESCC No. 3008 Para. 9.6.1 ESCC No. 3008 Para. 9.6.2	-	-	-	
02	External Visual Inspection	Para. 9.7 and Paras 4.2.4 and 4.2.5 of this spec.	Final Measurements Visual Inspection	ESCC No. 20500	-	-	-	
03	Temperature Rise	Para. 9.9	Temperature Rise	Rated Current (3)	-	-	25	°C
04	Shock	Para. 9.10	Measurements during Tests	100% U <sub>R</sub> (2) applied No Open or Short Circuits > 0.1ms		-	-	
			Visual Examination Insertion Loss	No Mechanical Damage Table 2 Items 4 to 9	- I <u>L</u>	- Table 2	-	
05	Vibration	Para. 9.11	Measurements during Tests During Last Cycle	Rated Current (3) and 100% U <sub>R</sub> (2) applied No Open or Short Circuits >0.1ms	-	-	-	
			Final Measurements Visual Examination Insertion Loss	No Mechanical Damage Table 2 Items 4 to 9	- Լլ	- Table 2	-	
06	Accelerated Damp Heat	Before tests, 10 cycles of Para. 9.2 Para. 9.12	Final Measurements Visual Examination Voltage Proof	After recovery of 4 to 24 hrs No corrosion or obliteration of marking Table 2 Item 2	- VP	- 90% U <sub>R</sub>	-	
			Insulation Resistance Insertion Loss	Table 2 Item 3 Table 2 Items 4 to 9	Ri I <sub>L</sub>	(2) (4) Table 2	-	
07	Low Air Pressure	Para. 9.13	Measurements during Tests Voltage Proof	During last 5 minutes Table 2 Item 2	VP	125% U <sub>R</sub> (2)	-	
			Visual Examination Final Measurements	No breakdown, flashover, deformation or seepage	-	-	-	
			Visual Examination	No breakdown, flashover, deformation or seepage	-	-	-	
08	Robustness of Terminations	Para. 9.14 and Para. 4.3.3 of this spec.	Final Measurements Visual Examination Voltage Drop	No damage Table 2 Item 1	- V <sub>dr</sub>	-	- Table 2	

- 1. The tests in this Table refer to either Chart IV or V and shall be used as applicable.
- 2. For U<sub>R</sub>, see Column 2(a) of Table 1(a).
- 3. For I<sub>R</sub>, see Column 7 of Table 1(a).
- 4. Greater than 10% of the value given in Table 2.
- 5. Greater than 50% of the value given in Table 2.



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# TABLE 6 - MEASUREMENTS AND INSPECTIONS ON COMPLETION OF ENVIRONMENTAL TESTS AND AT INTERMEDIATE POINTS AND ON COMPLETION OF ENDURANCE TESTING (CONT'D)

	ESCC GENERIC SE	PEC. NO. 3008	MEASUREMENTS	AND INSPECTIONS		LIMITS		
NO.	ENVIRONMENTAL AND ENDURANCE TESTS (1)	TEST METHOD AND CONDITIONS	IDENTIFICATION	CONDITIONS	SYMBOL	MIN.	MAX.	UNIT
09	Immersion	Before tests, 10 cycles of Para. 9.2 Para. 9.15	Final Measurements Visual Examination Voltage Proof Insulation Resistance	After recovery of 4 to 24 hrs No-obliteration of marking and harmful corrosion Table 2 Item 2 Table 2 Item 3	- VP Ri	- 90% U <sub>R</sub> (2) (4)	- -	
10	Overload	Part 9.16	Insertion Loss	Table 2 Items 4 to 9  140% of Rated Current (3) for 15 mins min.	i <sub>L</sub>	Tablé 2	-	
			Final Measurements Insulation Resistance Voltage Drop Visual Examination	Table 2 Item 3 Table 2 Item 1 No damage	Ri V <sub>dr</sub> -	Table 2 - -	- Table 2 -	
11	Resistance to Soldering Heat	Para. 9.17	Final Measurements Visual Examination Insulation Resistance Insertion Loss	After recovery of 1 to 2 hrs No damage Table 2 Item 3 Table 2 Items 4 to 9	Ri I <sub>L</sub>	- Table 2 Table 2		
12	Solderability	Para. 9.18 and Para. 4.3.4 of this spec.	Final Measurements Visual Examination	IEC No. 68-2-20 Para. 4.6.4, 4.7.4 or 4.9.3	-	-	-	
13	Operating Life	Para. 9.19	Initial Measurements Capacitance During Tests Intermediate	Table 2 Item 10 No Open or Short Circuit	C ·	Record -	values -	
;			Measurements Insulation Resistance Voltage Proof	Table 3 Item 3 After 24 hrs recovery Table 2 Item 2	Ri VP	Table 3	-	
			Insulation Resistance Capacitance Change Final Measurements	Table 2 Item 3 Table 2 Item 10	Ri ΔC/C	(2) (5) -	- Table 4	
			Insulation Resistance Voltage Proof	Table 3 Item 3 After 24 hrs recovery Table 2 Item 2	Ri VP	Table 3 90% U <sub>R</sub> (2)	-	
			Insulation Resistance Capacitance Change	Table 2 Item 3 Table 2 Item 10	Ri ΔC/C	(5) -	- Table 4	
14	Corrosion	Para. 9.20	Final Measurements Visual Examination	No corrosion, damage or obliteration of marking	-	-	-	
15	Permanence of Marking	Para. 9.21	Final Measurements Visual Examination	No corrosion or obliteration of marking	-	-	-	
16	Damp Heat (Non-hermetically Sealed)	Para. 9.24	Not applicable.					

NOTES: See Page 17.



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# APPENDIX 'A' AGREED DEVIATIONS FOR EUROFARAD (F)

ITEMS AFFECTED	DESCRIPTION OF DEVIATIONS
Paras. 4.2.2 and 4.2.3	(a) Para. 9.4.1.5, Voltage Drop: Voltage Drop may be performed as a DC Resistance measurement in accordance with MIL-STD-202, Method 303. In this case, the maximum value of DC Resistance (Rs) shall be as specified in Column 6 of Table 1(a).