ESCC
European Space Components Coordination

Pages 1 to 20

R.F. INDUCTORS, FIXED,

MINIATURE, MOULDED, SMD,

BASED ON SERIES MSCI 10K, 12K AND 20K

ESCC Detail Specification No. 3201/008

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93	Specification upissued to incorporate editorial/technical changes per DCR.

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APPENDICES (Applicable to specific Manufacturers only)
None.

1. GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, test and inspection data for R.F. Inductors, Fixed, Miniature, Moulded, SMD, based on Series MSCI 10K, 12K and 20K. It shall be read in conjunction with ESCC Generic Specification No. 3201, the requirements of which are supplemented herein.

1.2 COMPONENT TYPE VARIANTS AND RANGE OF COMPONENTS

Variants and range of components of the basic inductors specified herein, which are also 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 inductors specified herein are scheduled in Table 1(b).

1.4 PARAMETER DERATING INFORMATION (FIGURE 1)

Not applicable.

1.5 PHYSICAL DIMENSIONS

The physical dimensions of the inductors specified herein are shown in Figure 2.

1.6 FUNCTIONAL DIAGRAM

The functional diagram for the inductors 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. 3201 for R.F. Coils, Fixed.

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.

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

TYPE VARIANTS

Variant	Type	Figure Case Size	Terminal Finish	Weight Max. (g)
01	10K or 12K	2A or 2B	Au (1)	0.2
02	10K or 12K	2A or 2B	SnPb	0.2
03	20K	2C	Au (1)	0.5
04	20K	2C	SnPb	0.5

NOTES
1. For gold thickness, see Para. 4.4.2.

RANGE OF COMPONENTS - 10K SERIES

(1) Type Number 10K Series	(2) Inductance L (µH)	(3) Tolerance ±%	(4) Q Min. Q	(5) Test Frequency f_t (MHz)	(6) Min. Self-Resonant Frequency f_r (MHz)	(7) Max. D.C. Resistance R_{dc} (Ω)	(8) Rated D.C. Current I_R (mA)	(9) Case Size
L010K	0.010	10	60	150	1000	0.025	750	A
L012K	0.012	10	60	150	1000	0.025	750	A
L015K	0.015	10	60	150	1000	0.040	750	A
L018K	0.018	10	60	150	1000	0.040	750	A
L022K	0.022	5.0, 10	51	100	1000	0.040	750	A
L027K	0.027	5.0, 10	51	100	1000	0.040	750	A
L033K	0.033	5.0, 10	47	100	1000	0.050	640	A
L039K	0.039	5.0, 10	47	100	1000	0.070	600	A
L047K	0.047	5.0, 10	47	100	1000	0.080	550	A
L056K	0.056	5.0, 10	47	100	900	0.090	520	A
L068K	0.068	5.0, 10	47	100	900	0.10	480	A
L082K	0.082	5.0, 10	47	100	750	0.11	470	A
L10K	0.10	10	47	50	620	0.11	470	A
L12K	0.12	10	47	50	540	0.11	470	A
L15K	0.15	10	47	50	450	0.12	450	A
L18K	0.18	10	51	50	400	0.14	430	A
L22K	0.22	10	51	50	380	0.20	350	A
L27K	0.27	10	51	50	340	0.25	310	A
L33K	0.33	10	51	50	280	0.30	280	A
L39K	0.39	10	47	50	240	0.45	240	A
L47K	0.47	5.0, 10	47	25	210	0.50	230	A

RANGE OF COMPONENTS - 10K SERIES (CONT'D)

(1) Type Number 10K Series	(2) Inductance L (µH)	(3) Tolerance ±%	(4) Q Min. Q	(5) Test Frequency f_t (MHz)	(6) Min. Self-Resonant Frequency f_r (MHz)	(7) Max. D.C. Resistance R_{dc} (Ω)	(8) Rated D.C. Current I_R (mA)	(9) Case Size
L56K	0.56	5.0, 10	52	25	180	0.55	220	A
L68K	0.68	5.0, 10	52	25	160	0.58	210	A
L82K	0.82	5.0, 10	52	25	130	0.60	200	A
1L0K	1.0	5.0, 10	52	25	110	0.65	190	A
1L2K	1.2	2.0, 5.0, 10	42	7.9	110	0.75	180	A
1L5K	1.5	2.0, 5.0, 10	42	7.9	100	1.1	160	A
1L8K	1.8	2.0, 5.0, 10	48	7.9	95	1.2	150	A
2L2K	2.2	2.0, 5.0, 10	48	7.9	90	1.3	140	A
2L7K	2.7	2.0, 5.0, 10	48	7.9	65	1.5	130	A
3L3K	3.3	2.0, 5.0, 10	48	7.9	55	1.8	120	A
3L9K	3.9	2.0, 5.0, 10	48	7.9	45	2.0	110	A
4L7K	4.7	2.0, 5.0, 10	48	7.9	43	2.3	100	A
5L6K	5.6	2.0, 5.0, 10	48	7.9	40	2.5	100	A
6L8K	6.8	2.0, 5.0, 10	46	7.9	38	2.6	98	A
8L2K	8.2	2.0, 5.0, 10	46	7.9	35	2.8	95	A
100K	10	2.0, 5.0, 10	46	7.9	33	3.3	87	A

RANGE OF COMPONENTS - 12K SERIES

(1) Type Number 12K Series	(2) Inductance L (µH)	(3) Tolerance ±%	(4) Q Min. Q	(5) Test Frequency f_t (MHz)	(6) Min. Self-Resonant Frequency f_r (MHz)	(7) Max. D.C. Resistance R_{dc} (Ω)	(8) Rated D.C. Current I_R (mA)	(9) Case Size
120K	12	2.0, 5.0, 10	42	2.5	26	2.0	110	B
150K	15	2.0, 5.0, 10	44	2.5	24	2.2	105	B
180K	18	2.0, 5.0, 10	44	2.5	21	2.8	100	B
220K	22	2.0, 5.0, 10	48	2.5	20	3.5	85	B
270K	27	2.0, 5.0, 10	49	2.5	19	4.3	75	B
330K	33	2.0, 5.0, 10	50	2.5	14	5.5	68	B
390K	39	2.0, 5.0, 10	52	2.5	12	6.5	61	B
470K	47	2.0, 5.0, 10	53	2.5	11	8.5	54	B
560K	56	2.0, 5.0, 10	56	2.5	10	12	46	B
680K	68	2.0, 5.0, 10	53	2.5	9.0	13	42	B
820K	82	2.0, 5.0, 10	49	2.5	8.0	15	40	B
101K	100	2.0, 5.0, 10	49	2.5	7.0	18	36	B
121K	120	2.0, 5.0, 10	37	0.79	6.0	21	34	B

RANGE OF COMPONENTS - 12K SERIES (CONT'D)

(1) Type Number 12K Series	(2) Inductance L (µH)	(3) Tolerance ±%	(4) Q Min. Q	(5) Test Frequency f_t (MHz)	(6) Min. Self-Resonant Frequency f_r (MHz)	(7) Max. D.C. Resistance R_{dc} (Ω)	(8) Rated D.C. Current I_R (mA)	(9) Case Size
151K	150	2.0, 5.0, 10	30	0.79	5.0	26	31	B
181K	180	2.0, 5.0, 10	30	0.79	5.0	28	29	B
221K	220	2.0, 5.0, 10	26	0.79	4.5	32	28	B
271K	270	2.0, 5.0, 10	26	0.79	4.0	36	26	B
331K	330	2.0, 5.0, 10	24	0.79	3.7	42	24	B
391K	390	2.0, 5.0, 10	24	0.79	3.5	46	23	B
481K	470	2.0, 5.0, 10	24	0.79	3.0	68	19	B
561K	560	2.0, 5.0, 10	22	0.79	2.8	77	18	B
681K	680	2.0, 5.0, 10	20	0.79	2.5	85	17	B
821K	820	2.0, 5.0, 10	16	0.79	2.0	100	16	B
102K	1000	2.0, 5.0, 10	12	0.79	1.5	120	15	B

RANGE OF COMPONENTS - 20K SERIES

(1) Type Number 20K Series	(2) Inductance L (µH)	(3) Tolerance ±%	(4) Q Min. Q	(5) Test Frequency f_t (MHz)	(6) Min. Self-Resonant Frequency f_r (MHz)	(7) Max. D.C. Resistance R_{dc} (Ω)	(8) Rated D.C. Current I_R (mA)	(9) Case Size
L010K	0.010	10	60	150	1 000	0.04	1 000	C
L012K	0.012	10	70	150	1 000	0.04	1 000	C
L015K	0.015	10	75	150	1 000	0.04	1 000	C
L018K	0.018	10	75	150	1 000	0.04	1 000	C
L022K	0.022	10	60	100	1 000	0.05	1 000	C
L027K	0.027	10	60	100	1 000	0.05	1 000	C
L033K	0.033	10	60	100	1 000	0.05	1 000	C
L039K	0.039	10	60	100	1 000	0.06	900	C
L047K	0.047	10	65	100	800	0.06	900	C
L056K	0.056	10	65	100	760	0.06	900	C
L068K	0.068	10	65	100	700	0.07	840	C
L082K	0.082	10	65	100	650	0.07	840	C
L10K	0.10	10	65	50	570	0.07	840	C
L12K	0.12	10	65	50	520	0.07	840	C
L15K	0.15	10	75	50	400	0.08	790	C
L18K	0.18	10	75	50	360	0.08	790	C
L22K	0.22	10	70	50	320	0.08	790	C
L27K	0.27	10	70	50	270	0.10	700	C

RANGE OF COMPONENTS - 20K SERIES (CONT'D)

(1) Type Number 20K Series	(2) Inductance L (µH)	(3) Tolerance ±%	(4) Q Min. Q	(5) Test Frequency f_t (MHz)	(6) Min. Self-Resonant Frequency f_r (MHz)	(7) Max. D.C. Resistance R_{dc} (Ω)	(8) Rated D.C. Current I_R (mA)	(9) Case Size
L33K	0.33	10	70	50	240	0.10	700	C
L39K	0.39	10	70	50	220	0.10	700	C
L47K	0.47	10	70	25	190	0.14	590	C
L56K	0.56	10	70	25	170	0.19	510	C
L68K	0.68	10	70	25	160	0.26	430	C
L82K	0.82	10	75	25	150	0.30	400	C
1L0K	1.0	10	75	25	130	0.34	380	C
1L2K	1.2	10	65	7.9	120	0.45	330	C
1L5K	1.5	10	65	7.9	110	0.57	290	C
1L8K	1.8	10	65	7.9	100	0.72	260	C
2L2K	2.2	10	65	7.9	80	0.9	230	C
2L7K	2.7	10	65	7.9	60	1.1	210	C
3L3K	3.3	10	60	7.9	50	1.2	200	C
3L9K	3.9	10	60	7.9	45	1.4	180	C
4L7K	4.7	10	60	7.9	42	1.6	170	C
5L6K	5.6	10	65	7.9	40	1.8	160	C
6L8K	6.8	10	65	7.9	37	2.4	140	C
8L2K	8.2	10	65	7.9	34	3.0	130	C
100K	10	10	65	7.9	29	3.5	120	C
120K	12	10	60	2.5	27	3.6	118	C
150K	15	10	60	2.5	22	3.7	115	C
180K	18	10	60	2.5	17	3.8	114	C
220K	22	10	60	2.5	16	3.9	113	C
270K	27	10	65	2.5	15	4.0	110	C
330K	33	10	65	2.5	14	5.0	100	C
390K	39	10	65	2.5	13	7.0	84	C
470K	47	10	70	2.5	12	8.0	79	C
560K	56	10	70	2.5	11	10	70	C
680K	68	10	65	2.5	10	11	67	C
820K	82	10	60	2.5	9.0	12	64	C
101K	100	10	60	2.5	8.0	13	62	C
121K	120	10	40	0.79	7.0	14	59	C
151K	150	10	40	0.79	6.0	16	56	C
181K	180	10	40	0.79	5.0	18	52	C
221K	220	10	40	0.79	4.0	24	45	C
271K	270	10	40	0.79	3.3	25	44	C
331K	330	10	40	0.79	3.1	29	41	C
391K	390	10	40	0.79	2.9	32	39	C
471K	470	10	35	0.79	2.4	35	37	C
561K	560	10	35	0.79	2.1	45	33	C
681K	680	10	35	0.79	1.9	55	30	C
821K	820	10	30	0.79	1.8	70	26	C
102K	1 000	10	30	0.79	1.7	80	25	C

TABLE 1(b) - MAXIMUM RATINGS

No.	Characteristics	Symbol	Maximum Ratings	Unit	Remarks
1	Rated D.C. Current	I_R	See Table 1(a)	mA	
2	Dielectric Withstanding Voltage	DWV	200	Vrms	
3	Operating Temperature Range	T_{op}	−55 to +125	°C	T_{amb}
4	Storage Temperature Range	T_{stg}	−65 to +125	°C	
5	Soldering Temperature	T_{sol}	+260	°C	Note 1

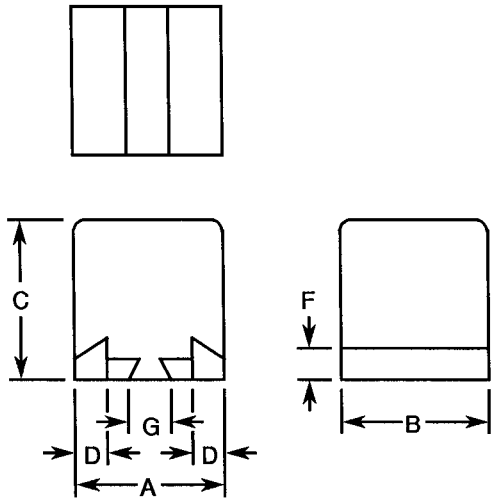
NOTES

1. Duration 5 seconds maximum and the same termination shall not be resoldered until 3 minutes have elapsed.

FIGURE 1 - PARAMETER DERATING INFORMATION

Not applicable.

FIGURE 2 - PHYSICAL DIMENSIONS



SYMBOL	CASE SIZE A		CASE SIZE B		CASE SIZE C	
	MILLIMETRES		MILLIMETRES		MILLIMETRES	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
A	-	2.80	-	2.80	3.74	4.14
B	-	2.67	-	2.67	2.98	3.38
C	-	2.16	-	2.54	-	3.30
D	0.62	0.90	0.62	0.90	0.86	1.02
F	0.32	0.60	0.32	0.60	0.38	0.64
G	0.72	1.23	0.72	1.23	1.85	-

FIGURE 3 - FUNCTIONAL DIAGRAM

4. REQUIREMENTS

4.1 GENERAL

The complete requirements for procurement of the inductors specified herein are stated in this specification and ESCC Generic Specification No. 3201 for R.F. Coils, Fixed. Deviations from the Generic Specification, applicable to this specification only, are listed 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 Deviations from Special In-process Controls

None.

4.2.2 Deviations from Final Production Tests (Chart II)

None.

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

(a) Para. 9.3.3, Electrical Measurements at High and Low Temperatures: Shall not be performed for level 'C' procurements.

(b) Para. 9.4, Radiographic Inspection: Shall not be performed.

4.2.4 Deviations from Qualification Tests (Chart IV)

(a) Para. 9.15, Vibration: Shall not be performed.

(b) Para. 9.16, Shock (Specified Pulse): Shall not be performed.

(c) Para. 9.17, Immersion: Shall not be performed.

(d) Para. 9.18, Moisture Resistance: There shall be no polarisation voltage during test.

4.2.5 Deviations from Lot Acceptance Tests (Chart V)

(a) Para. 9.15, Vibration: Shall not be performed.

(b) Para. 9.16, Shock (Specified Pulse): Shall not be performed.

(c) Para. 9.18, Moisture Resistance: There shall be no polarisation voltage during test.

4.3 MECHANICAL REQUIREMENTS

4.3.1 Dimension Check

The dimensions of the inductors specified herein shall be verified in accordance with the requirements set out in Para. 9.6 of ESCC Generic Specification No. 3201 and they shall conform to those shown in Figure 2 of this specification.

4.3.2 Weight

The maximum weight of the inductors specified herein shall be as given in Table 1(a) - Type Variants.

4.3.3 Terminal Strength

Not applicable.

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 inductors 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

As a minimum, a resin moulding shall ensure the inductor's protection.

4.4.2 Terminal Material and Finish

The terminal material shall be brass plated with 2.0 to 3.0 µm of copper, with either SnPb finish or further underplated with 2.0 to 3.0 µm of nickel with gold plated finish.

The gold thickness is dependent on inductance value, i.e.:

- 5.0µm for 0.01 to 1.0µH.
- 15µm for 1.2µH to 1.0mH.

4.5 MARKING

4.5.1 General

The marking of all 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) The SCC Component Number.

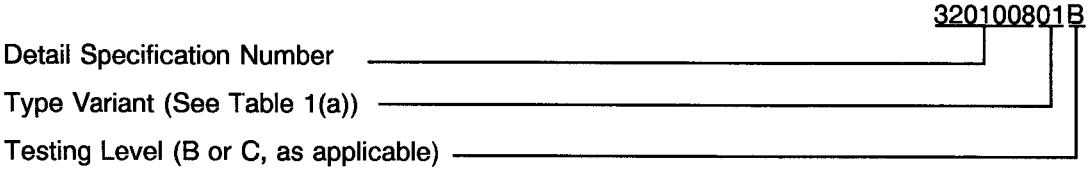
(b) Electrical Characteristics and Ratings.

(c) Traceability Information.

NOTES:
1. When inductor colour codes are used, the colour bands indicate inductance in nano-Henries.

4.5.2 The SCC Component Number

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



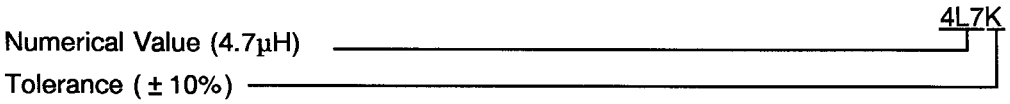
4.5.3 Electrical Characteristics and Ratings

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

(a) Numerical Value.

(b) Tolerance.

The information shall be constituted and marked as follows:-



4.5.3.1 Numerical Values

The numerical values shall be expressed by means of the following codes. The unit quantity for marking shall be in microhenries.

Numerical Value	Code
0.0XX	L0XX
0.XX	LXX
X.X	XLX
XX	XX0
XX10[1]	XX1
XX10[2]	XX2

4.5.3.2 Tolerances

The tolerances on numerical values shall be indicated by the code letters specified hereafter.

Tolerance (±%)	Code Letter
2.0	G
5.0	J
10	K

4.5.4 Traceability Information

Traceability information shall be marked in accordance with the requirements of ESCC Basic Specification No. 21700.

4.6 ELECTRICAL MEASUREMENTS

4.6.1 Electrical Measurements at Room Temperature

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 Electrical Measurements at High and Low Temperatures

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

4.6.3 Circuits for Electrical Measurements (Figure 4)

Not applicable.

4.7 BURN-IN TESTS

4.7.1 Parameter Drift Values

The parameter drift values applicable to burn-in are specified in Table 4 of this specification. Unless otherwise stated, measurements shall be performed at $T_{amb} = +22 \pm 3$ °C.

The parameter drift values (Δ) applicable to the parameters scheduled shall not be exceeded. In addition to these drift value requirements for a given parameter, the appropriate limit value 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. 3201. The conditions for burn-in shall be as specified in Table 5(a) of this specification.

On completion of burn-in, a recovery period of 24 ± 2 hours is necessary before the end measurements.

4.7.3 Electrical Circuit for Burn-in (Figure 5(a))

Not applicable.

TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE

No.	Characteristics	Symbol	ESCC 3201 Test Method	Test Condition	Limits		Unit
					Min	Max	
1	Inductance	L	Para. 9.3.1.1	Para. 9.3.1.1.5	Note 1		µH
2	Q Factor	Q	Para. 9.3.1.2	Para. 9.3.1.2.2	Note 2	-	-
3	Self-resonant Frequency	f_r	Para. 9.3.1.3	Para. 9.3.1.3.3 Note 3	Note 4	-	MHz
4	D.C. Resistance	R_{dc}	Para. 9.3.1.4	Para. 9.3.1.4	-	Note 5	Ω
5	Insulation Resistance	Ri	Para. 9.3.1.6	Para. 9.3.1.6	1.0	-	GΩ

NOTES

1. See Columns 2 and 3 of Table 1(a).
2. See Column 4 of Table 1(a).
3. Measurements to be performed on 100% basis, go-no-go.
4. See Column 6 of Table 1(a).
5. See Column 7 of Table 1(a).

TABLE 3 - ELECTRICAL MEASUREMENTS AT HIGH AND LOW TEMPERATURES

No.	Characteristics	Symbol	ESCC 3201 Test Method	Test Condition (Note 1)	Limits		Unit
					Min	Max	
1	Inductance	L	Para. 9.3.1.1	Para. 9.3.1.1.5	Note 2		µH
				At T_{amb} = −55°C	−15	+10	%
				At T_{amb} = +125°C	−10	+15	

NOTES

1. To be performed on 5 components.
2. See Column 2 of Table 1(a).

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
1	Inductance	L	As per Table 2	As per Table 2	±10 or (1) ±5.0	%

NOTES

1. $L < 0.1\mu H$ or $L \geq 0.1\mu H$.

TABLE 5(a) - CONDITIONS FOR BURN-IN

No.	Characteristic	Symbol	Condition	Unit
1	Ambient Temperature	T_{amb}	+125(+0−3)	°C

TABLE 5(b) - CONDITIONS FOR OPERATING LIFE TESTS

No.	Characteristic	Symbol	Condition	Unit
1	Ambient Temperature	T_{amb}	+125(+0−3)	°C
2	Loading and Cycling	-	Para. 9.19 of ESCC 3201	-

FIGURE 5(a) - ELECTRICAL CIRCUIT FOR BURN-IN

Not applicable.

FIGURE 5(b) - ELECTRICAL CIRCUIT FOR OPERATING LIFE TESTS

Not applicable.

4.8 ENVIRONMENTAL AND ENDURANCE TESTS (CHARTS IV AND V OF ESCC GENERIC SPECIFICATION NO. 3201)

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 $T_{amb} = +22 \pm 3$ °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 $T_{amb} = +22 \pm 3$ °C.

4.8.3 Measurements and Inspections on Completion of Endurance Tests

The parameters to be measured and inspections to be performed on completion of endurance tests are scheduled in Table 6. Unless otherwise stated, the measurements shall be performed at $T_{amb} = +22 \pm 3$ °C.

4.8.4 Conditions for Operating Life Tests (Part of Endurance Testing)

The requirements for operating life testing are specified in Section 9 of ESCC Generic Specification No. 3201. The conditions for operating life testing shall be as specified in Table 5(b) of this specification.

4.8.5 Electrical Circuit for Operating Life Tests (Figure 5(b))

Not applicable.

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

NO.	ESCC GENERIC SPEC. NO. 3201		MEASUREMENTS AND INSPECTIONS		SYMBOL	LIMITS		UNIT
	ENVIRONMENTAL AND ENDURANCE TESTS (1)	TEST METHOD AND CONDITIONS	IDENTIFICATION	CONDITIONS		MIN.	MAX.	
01	Thermal Shock	Para. 9.2	Visual Examination	Evidence of damage or loosening of terminals	-	-	-	-
02	Solderability	Para. 9.7	Visual Examination	MIL-STD-202 Method 208 Solid Wire Termination Criteria	-	-	-	-
03	Barometric Pressure	Para. 9.8	**During Test** Dielectric Withstanding Voltage DWV Leakage Current	While still at low pressure Para. 9.3.1.5 of ESCC 3201 200Vrms No breakdown or flashover	DWV	- -	0.1 -	mA -
04	Temperature Rise	Para. 9.9 and Table 1(a) of this spec. at +90°C	Temperature Rise	Within 30 seconds of removal of power Temperature Change	ΔT	-	25	°C
05	Overload	Para. 9.10 and Table 1(a) of this spec.	**After Test** Visual Examination **Final Measurements** D.C. Resistance Insulation Resistance Dielectric Withstanding Voltage DWV Leakage Current	Evidence of cracked cases, charred windings, distorted or softened insulation or loosening of terminals **After 24 hours** Table 2 Item 4 Table 2 Item 5 Gen. 3201 Para. 9.3.1.5 200Vrms	- R_{dc} Ri I_L	- Table 2 Item 4 1.0 -	- - 0.1	- Ω GΩ mA
06	Resistance to Soldering Heat	Para. 9.11	**Final Measurements** Inductance Q Factor Self-Res. Frequency D.C. Resistance Dielectric Withstanding Voltage DWV Leakage Current **After Test** Visual Examination	 Table 2 Item 1 Table 2 Item 2 Table 2 Item 3 Table 2 Item 4 Gen. 3201 Para. 9.3.1.5 200Vrms Evidence of damage or loosening of terminals	 L Q f_r R_{dc} I_L -	 Table 2 Item 1 Table 2 Item 2 Table 2 Item 3 Table 2 Item 4 - -	 0.1 -	 μH - MHz Ω mA -
07	Terminal Strength	Para. 9.12	Not applicable	-	-	-	-	-
08	Low Temperature Storage	Para. 9.14 and Table 1(b) of this spec.	Visual Examination	Evidence of cracks or other damage	-	-	-	-
09	Vibration	Para. 9.15	Not applicable	-	-	-	-	-
10	Shock (Specified Pulse)	Para. 9.16	Not applicable	-	-	-	-	-

NOTES

1. The tests in this Table refer to either Chart IV or V and shall be used as applicable.

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

NO.	ESCC GENERIC SPEC. NO. 3201		MEASUREMENTS AND INSPECTIONS		SYMBOL	LIMITS		UNIT
	ENVIRONMENTAL AND ENDURANCE TESTS (1)	TEST METHOD AND CONDITIONS	IDENTIFICATION	CONDITIONS		MIN.	MAX.	
11	Immersion	Para. 9.17	Not applicable	-	-	-	-	-
12	Moisture Resistance	Para. 9.18 and Paras. 4.2.4 and 4.2.5 of this spec. Before Tests, Thermal Shock, MIL-STD-202, Method 107, Cond 'A'	**Final Measurements**	Within 30 mins of removal from 1.5 to 3.5 hr Conditioning				
			Dielectric Withstanding Voltage	Para. 9.3.1.5 of ESCC 3201				
			DWV Leakage Current	200Vrms	I_L	-	0.1	mA
			Insulation Resistance	Table 2 Item 5	Ri	100	-	MΩ
				Within 1 hr				
			Inductance	Table 2 Item 1	L	Table 2 Item 1		µH
			Q Factor	Table 2 Item 2	Q	Table 2 Item 2		-
			Self-Res. Frequency	Table 2 Item 3	f_r	Table 2 Item 3		MHz
			DC Resistance	Table 2 Item 4	R_{dc}	Table 2 Item 4		Ω
			After Test					
			Visual Examination	No evidence of corrosion	-	-	-	-
13	Operating Life	Para. 9.19	**Initial Measurements**					
			Inductance	Table 2 Item 1	L	Table 2 Item 1		µH
			Intermediate Measurements	**At 1000 hours** After a recovery period of 30 mins				
			Dielectric Withstanding Voltage	Para. 9.3.1.5 of ESCC 3201				
			DWV Leakage Current	200Vrms	I_L	-	0.1	mA
			Inductance Change	Table 2 Item 1	ΔL/L	−10 or (2) −5.0	+10 or (2) +5.0	%
			Final Measurements	**At 1000 and 2000 hours** After a recovery period of 30 mins				
			Dielectric Withstanding Voltage	Para. 9.3.1.5 of ESCC 3201				
			DWV Leakage Current	200Vrms	I_L	-	0.1	mA
			Inductance Change	Table 2 Item 1	ΔL/L	−10 or (2) −5.0	+10 or (2) +5.0	%
			Q Factor	Table 2 Item 2	Q	Table 2 Item 2		-
			Self-Res. Frequency	Table 2 Item 3	f_r	Table 2 Item 3		MHz
			DC Resistance	Table 2 Item 4	R_{dc}	Table 2 Item 4		Ω
			Insulation Resistance	Table 2 Item 5	Ri	100	-	MΩ

NOTES

1. The tests in this Table refer to either Chart IV or V and shall be used as applicable.
2. $L < 0.1\mu H$ or $L \geq 0.1\mu H$.