



**CONNECTORS, ELECTRICAL, FILTERED,
RECTANGULAR,
NON-REMOVABLE SOLDER BUCKET CONTACTS**

BASED ON TYPE D*J

ESCC Detail Specification No. 3405/001

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DOCUMENTATION CHANGE NOTICE

(Refer to <https://escies.org> for ESCC DCR content)

DCR No.	CHANGE DESCRIPTION
1535	Specification updated to incorporate changes per DCR.

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1 GENERAL

1.1 SCOPE

This specification details the ratings, physical and electrical characteristics, and test and inspection data for the component type variants specified below. It supplements the requirements of, and shall be read in conjunction with, the ESCC Generic Specification listed under Applicable Documents.

1.2 APPLICABLE DOCUMENTS

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

- (a) ESCC Generic Specification No. [3405](#) – Connectors, Electrical, Filtered, Rectangular.
- (b) ESCC Detail Specification No. [3401/022](#) – Accessories for Rectangular Connectors 3401/001, 3401/002 and Connector Savers 3401/020.
- (c) [MIL-DTL-24308](#) – Rack and Panel Connectors, Miniature.

1.3 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.

1.4 THE ESCC COMPONENT NUMBER AND COMPONENT TYPE VARIANTS

1.4.1 The ESCC Component Number

The ESCC Component Number shall be constituted as follows:

Example: 340500101100

- Detail Specification Reference: 3405001
- Component Type Variant Number: 01 (as required)
- Filter Arrangement Code Number: 100 (as required)

1.4.2 Component Type Variants

The Component Type Variants applicable to this specification are as follows:

Type Variant	Number of Contacts	Shell Size	Contact Type	Mating Force Max (N)	Unmating Force (N)		Weight Max (g)
					Min	Max	
01	9	E	Male	30	3.5	20	12
02	9	E	Female	30	3.5	20	13.5
03	15	A	Male	50	4.5	34	18.5
04	15	A	Female	50	4.5	34	20.5
05	25	B	Male	83	8	55	28
06	25	B	Female	83	8	55	31
07	37	C	Male	123	11	83	38.5
08	37	C	Female	123	11	83	42
09	50	D	Male	166	14.5	120	47
10	50	D	Female	166	14.5	120	51

1.4.3.5 Filter Arrangements – Variants 09, 10 (Shell Size D)

Filter Arrangement Code	Contact Position																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
100	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
101	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
102	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
103	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
104	L	L	L	L	L	L	M	M	M	M	M	M	S	S	H	H	H	L	L	L

Filter Arrangement Code	Contact Position (Continued)																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
100	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
101	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
102	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
103	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
104	L	L	M	M	M	M	M	S	S	S	H	H	H	L	L	L	L	L	L	M

Filter Arrangement Code	Contact Position (Continued)									
	41	42	43	44	45	46	47	48	49	50
100	L	L	L	L	L	L	L	L	L	L
101	M	M	M	M	M	M	M	M	M	M
102	S	S	S	S	S	S	S	S	S	S
103	H	H	H	H	H	H	H	H	H	H
104	M	M	M	M	S	S	S	H	H	H

1.5 MAXIMUM RATINGS

The maximum ratings shall not be exceeded at any time during use or storage.

Maximum ratings shall only be exceeded during testing to the extent specified in this specification and when stipulated in Test Methods and Procedures of the ESCC Generic Specification.

Characteristics	Symbols	Maximum Ratings	Units	Remarks
Rated/Working Voltage Low Frequency Medium, Standard, High Frequency Non-filtered	U_R	100 200 300	V	Note 1
DC Rated Current	I_R	5	A	
Capacitor AC Rated Current	I_{Rac}	250	mArms	
Operating Temperature Range	T_{op}	-55 to +125	°C	T_{amb}

Characteristics	Symbols	Maximum Ratings	Units	Remarks
Storage Temperature Range	T_{stg}	-65 to +125	°C	
Soldering Temperature	T_{sol}	+260	°C	Note 2

NOTES:

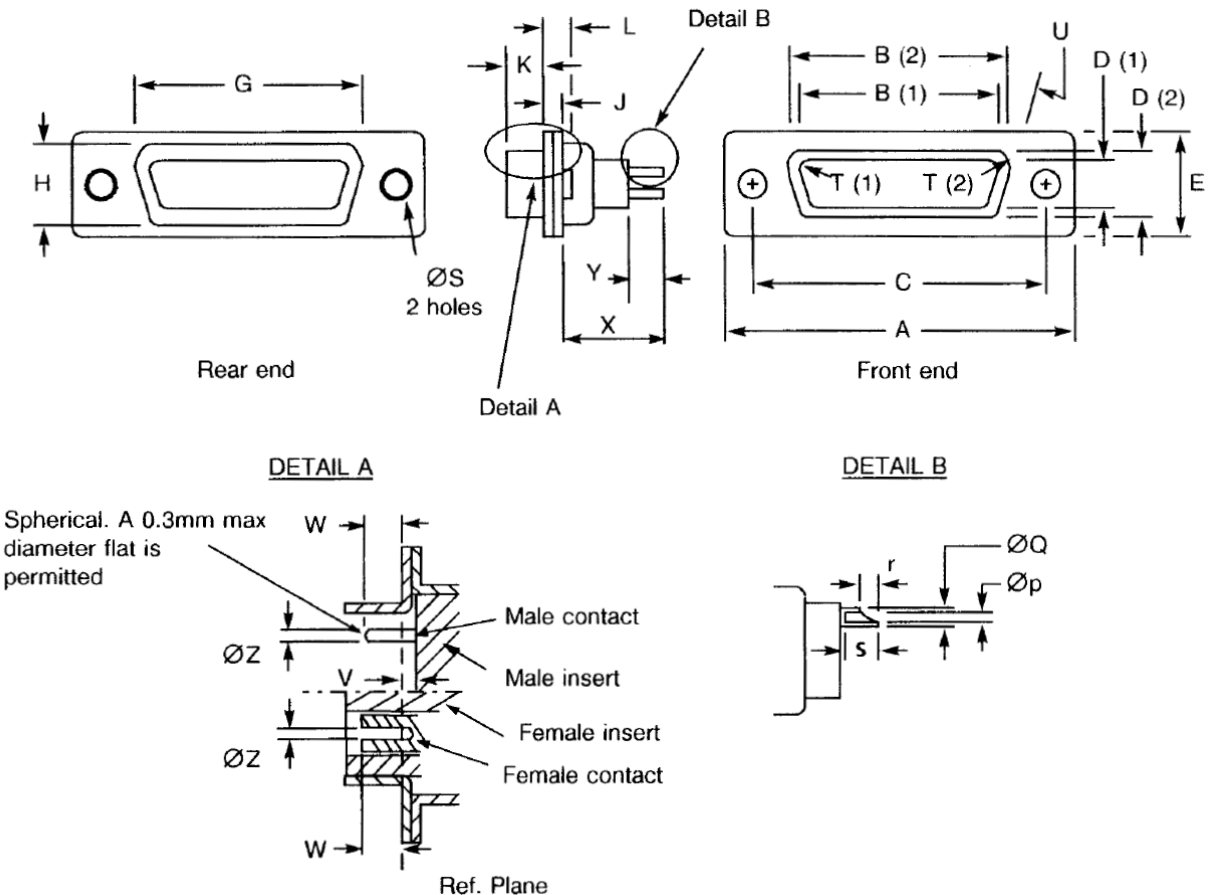
- This characteristic is not applicable to grounded contacts and for filtered contacts the following voltage derating applies:
The Rated Voltage shall be derated linearly from 100% U_R at $T_{amb} = +25^{\circ}C$ to 50% U_R at $T_{amb} = +125^{\circ}C$.
- Duration 10 seconds maximum and the same contact shall not be resoldered until 3 minutes have elapsed.

1.6 PHYSICAL DIMENSIONS

Tables of dimensions for all Component Type Variants are given in Subparagraphs 1.6.1 to 1.6.5 below.

All dimensions are in millimetres except for dimension "U", which is in °.

The underlined dimensions in the tables are critical to ensure intermateability.



NOTES:

- This dimension only applies to connectors with male contacts.
- This dimension only applies to connectors with female contacts.

1.6.1 Component Type Variants 01 and 02 (Shell Size E)

Type Variant	Symbol/ Dim.	A	B	C	D	E	G	H	J	K	L	ØS	I	U°	V	W	X	Y	ØZ	Øp	ØQ	r	s
01	Min	30.43	16.79	24.87	8.23	12.17	19.02	10.46	0.51	5.82	0.89	2.92	2.59	9	0	4.03	-	4.5	0.99	1.1	1.45	1.85	2.4
	Max	31.19	17.04	25.12	8.48	12.93	19.53	10.97	1.02	6.13	1.52	3.2	2.69	11	0.4	-	22	-	1.04	1.15	1.51	2.15	-
02	Min	30.43	16.21	24.87	7.77	12.17	19.02	10.46	0.51	5.87	0.89	2.92	2.46	9	-	3.63	-	4.5	1.07	1.1	1.45	1.85	2.4
	Max	31.19	16.46	25.12	8.03	12.93	19.53	10.97	1.02	6.3	1.52	3.2	2.62	11	-	-	22	-	1.14	1.15	1.51	2.15	-

1.6.2 Component Type Variants 03 and 04 (Shell Size A)

Type Variant	Symbol/ Dim.	A	B	C	D	E	G	H	J	K	L	ØS	I	U°	V	W	X	Y	ØZ	Øp	ØQ	r	s
03	Min	38.76	25.12	33.2	8.23	12.17	27.25	10.46	0.51	5.82	0.89	2.92	2.59	9	0	4.03	-	4.5	0.99	1.1	1.45	1.85	2.4
	Max	39.52	25.37	33.45	8.48	12.93	27.76	10.97	1.02	6.13	1.52	3.2	2.69	11	0.4	-	22	-	1.04	1.15	1.51	2.15	-
04	Min	38.76	24.54	33.2	7.77	12.17	27.25	10.46	0.51	5.87	0.89	2.92	2.46	9	-	3.63	-	4.5	1.07	1.1	1.45	1.85	2.4
	Max	39.52	24.79	33.45	8.03	12.93	27.76	10.97	1.02	6.3	1.52	3.2	2.62	11	-	-	22	-	1.14	1.15	1.51	2.15	-

1.6.3 Component Type Variants 05 and 06 (Shell Size B)

Type Variant	Symbol/ Dim.	A	B	C	D	E	G	H	J	K	L	ØS	I	U°	V	W	X	Y	ØZ	Øp	ØQ	r	s
05	Min	52.65	38.84	46.91	8.23	12.17	41.02	10.46	0.51	5.69	1.05	2.92	2.59	9	0	3.81	-	4.5	0.99	1.1	1.45	1.85	2.4
	Max	53.42	39.09	47.17	8.48	12.93	41.53	10.97	1.24	6.13	1.78	3.2	2.69	11	0.6	-	22	-	1.04	1.15	1.51	2.15	-
06	Min	52.65	38.25	46.91	7.77	12.17	41.02	10.46	0.51	5.87	0.89	2.92	2.46	9	-	3.63	-	4.5	1.07	1.1	1.45	1.85	2.4
	Max	53.42	38.51	47.17	8.03	12.93	41.53	10.97	1.02	6.3	1.52	3.2	2.62	11	-	-	22	-	1.14	1.15	1.51	2.15	-

1.6.4 Component Type Variants 07 and 08 (Shell Size C)

Type Variant	Symbol/ Dim.	A	B	C	D	E	G	H	J	K	L	ØS	I	U°	V	W	X	Y	ØZ	Øp	ØQ	r	s
07	Min	68.94	55.3	63.37	8.23	12.17	57.45	10.46	0.51	5.69	1.05	2.92	2.59	9	0	3.81	-	4.5	0.99	1.1	1.45	1.85	2.4
	Max	69.7	55.55	63.63	8.48	12.93	57.96	10.97	1.24	6.13	1.78	3.2	2.69	11	0.6	-	22	-	1.04	1.15	1.51	2.15	-
08	Min	68.94	54.71	63.37	7.77	12.17	57.45	10.46	0.51	5.87	0.89	2.92	2.46	9	-	3.63	-	4.5	1.07	1.1	1.45	1.85	2.4
	Max	69.7	54.97	63.63	8.03	12.93	57.96	10.97	1.02	6.3	1.52	3.2	2.62	11	-	-	22	-	1.14	1.15	1.51	2.15	-

1.6.5 Component Type Variants 09 and 10 (Shell Size D)

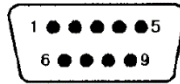
Type Variant	Symbol/ Dim.	A	B	C	D	E	G	H	J	K	L	ØS	I	U°	V	W	X	Y	ØZ	Øp	ØQ
09	Min	66.55	52.68	60.99	10.95	14.99	55.07	13.31	0.51	5.69	1.05	2.92	2.59	9	0	3.81	-	4.5	0.99	1.1	1.45
	Max	67.31	52.93	61.24	11.33	15.75	55.58	13.82	1.24	6.13	1.78	3.2	2.69	11	0.6	-	22	-	1.04	1.15	1.51
10	Min	66.55	52.3	60.99	10.62	14.99	55.07	13.31	0.51	5.87	0.89	2.92	2.46	9	-	3.63	-	4.5	1.07	1.1	1.45
	Max	67.31	52.55	61.24	10.87	15.75	55.58	13.82	1.02	6.3	1.52	3.2	2.62	11	-	-	22	-	1.14	1.15	1.51

Type Variant	Symbol/ Dim.	r	s
09	Min	1.85	2.4
	Max	2.15	-
10	Min	1.85	2.4
	Max	2.15	-

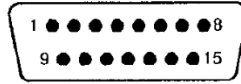
1.7 CONTACT ARRANGEMENTS

The contact arrangements for the available Shell Sizes are shown below (front view of Male Insert):

Shell Size E - 9 Contacts



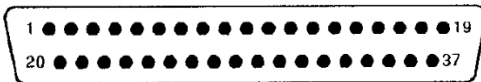
Shell Size A - 15 Contacts



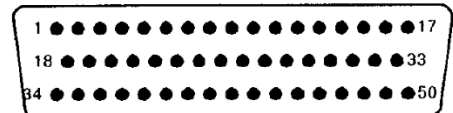
Shell Size B - 25 Contacts



Shell Size C - 37 Contacts



Shell Size D - 50 Contacts

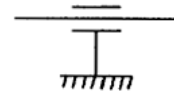


NOTES:

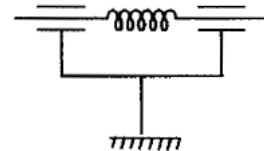
1. The contact locations are in accordance with [MIL-DTL-24308](#) specification sheets and they shall not be checked during procurement.
2. Both sides of the inserts shall be marked with the minimum marking shown.

1.8 CONTACT FUNCTIONAL DIAGRAMS

Functional diagram (equivalent circuit) for Low Frequency Filter Contact



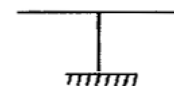
Functional diagram (equivalent circuit) for Medium, Standard and High Frequency Filter Contacts



Functional diagram (equivalent circuit) for Non-filtered Contact

Not applicable

Functional diagram (equivalent circuit) for Grounded Contact



1.9 MATERIALS AND FINISHES

1.9.1 Shell

The shell shall be made of brass with gold plating of thickness $\geq 1.27\mu\text{m}$ over copper underplating of thickness $\geq 2.54\mu\text{m}$. The gold shall be of purity 99% or higher with a hardness of 130 to 200 knoop.

1.9.2 Insert

The insert shall be made of glassfibre-filled diallylphthalate resin.

1.9.3 Contact Body

The contact body shall be made of copper alloy with gold plating of thickness $\geq 1.27\mu\text{m}$ over nickel underplating of thickness $\geq 2\mu\text{m}$.

The plating thickness in the solder bucket shall be $\geq 0.2\mu\text{m}$ of gold over $\geq 0.8\mu\text{m}$ of nickel.

1.9.4 Contact Filter

- Capacitor: ceramic dielectric.
- Ferrite: sintered iron oxide.

1.9.5 Ground Plane

The ground plane shall be made of copper alloy with gold plating of thickness $\geq 2.5\mu\text{m}$ over copper underplating of thickness $\geq 1\mu\text{m}$.

1.9.6 Guiding and Locking Devices

The materials and finishes of guiding and locking devices are specified in ESCC Detail Specification No. [3401/022](#).

2 REQUIREMENTS

2.1 GENERAL

The complete requirements for procurement of the components specified herein are as stated in this specification and the ESCC Generic Specification. Permitted deviations from the Generic Specification, applicable to this specification only, are listed below.

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

2.1.1 Deviations from the Generic Specification

2.1.1.1 *Deviations from Production Control Applicable to Contacts – Chart F2*

- Operating Life Test for Filter Elements: Not applicable to non-filtered and grounded contacts.
- Burn-in: Not applicable to non-filtered and grounded contacts.
- Parameter Drift Value Measurements: Not applicable to non-filtered and grounded contacts.
- High and Low Temperatures Electrical Measurements: Not applicable to non-filtered and grounded contacts.

2.1.1.2 *Deviations from Screening Tests – Chart F3*

- Burn-in: Not applicable to non-filtered and grounded contacts.
- Parameter Drift Value Measurements: Not applicable to non-filtered and grounded contacts.
- High and Low Temperatures Electrical Measurements: Not applicable to non-filtered and grounded contacts.

2.1.1.3 *Deviations from Qualification and Periodic Tests – Chart F4*

- Operating Life: Not applicable to non-filtered and grounded contacts.

2.2 MARKING

The marking shall be in accordance with the requirements of ESCC Basic Specification No. 21700 and as follows.

The information to be marked on the component or its primary package shall be:

- (a) The ESCC qualified components symbol (for ESCC qualified components only).
- (b) Contact identification, as shown in Para. 1.7.
- (c) The ESCC Component Number.
- (d) Traceability information.

2.3 ENVIRONMENTAL AND MECHANICAL TESTS

The following requirements apply to tests performed on the connector lot, including (where applicable) the connector's component parts, as specified in the ESCC Generic Specification:

- (a) Para. 8.5, Contact Capability

The following weights and dimensions apply:

- Pick-up weight: 28.35g with a pin diameter of 0.99 to 0.993mm
- Drop weight: 226.8g with a pin diameter of 1.039 to 1.04mm
- Insertion depth: 4mm

- (b) Para. 8.18, Insert Retention (In Shell)

An axial load of 42.8N/cm² shall be applied to the insert.

- (c) Para. 8.20, Engagement And Separation Forces

The following dimensions and engagement and separation forces apply:

	Diameter (mm)		Engagement Force (N) Max	Separation Force (N)	
	Min	Max		Min	Max
Max Ø Test Pin	1.039	1.04	3.33	-	2.22
Min Ø Test Pin	0.99	0.993	-	0.28	-

- (d) Para. 8.21, Oversize Pin Exclusion

The following dimensions and applied force apply:

- Test pin diameter: 1.166mm minimum, 1.17mm maximum.
- Applied force: 3.33N

- (e) Para. 8.22, Probe Damage

The following dimensions and bending moment apply:

- Probe diameter: 1.007mm minimum, 1.033mm maximum.
- Bending moment: 5.65N.cm at the end of the probe.

- (f) Para. 8.23, Solderability

Size A soldering iron shall be used.

- (g) Para. 8.25, Contact Retention (In Insert)

A force of 40N shall be applied to the engagement end of each contact to be tested.

2.4 ELECTRICAL MEASUREMENTS AT ROOM, HIGH AND LOW TEMPERATURES

Electrical measurements shall be performed at room, high and low temperatures.

2.4.1 Room Temperature Electrical Measurements

The measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}C$. Consolidated Notes follow the Room Temperature Electrical Measurements tables.

2.4.1.1 Room Temperature Electrical Measurements for Grounded Contacts

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Contact Resistance at Low Level	Rcl	ESCC No. 3405	-	6	mΩ
Ground Resistance	Rcg	ESCC No. 3405	-	3	mΩ

2.4.1.2 Room Temperature Electrical Measurements for Non-filtered Contacts

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance	Ri	ESCC No. 3405 Test voltage = 500V	5	-	GΩ
Voltage Proof	VP	ESCC No. 3405 Test current = 500μA	1250	-	V
Contact Resistance at Low Level	Rcl	ESCC No. 3405	-	6	mΩ
Contact Resistance at Rated Current	Rcr	ESCC No. 3405	-	5	mΩ

2.4.1.3 Room Temperature Electrical Measurements for Low Frequency Filter Contacts

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance	Ri	ESCC No. 3405 Test voltage = 100V	5	-	GΩ
Voltage Proof	VP	ESCC No. 3405 Test current = 500μA	300	-	V
Contact Resistance at Low Level	Rcl	ESCC No. 3405	-	8.5	mΩ
Contact Resistance at Rated Current	Rcr	ESCC No. 3405	-	6	mΩ
Capacitance	C	ESCC No. 3405 Test voltage: 0.1Vrms Frequency: 1 ±0.1kHz	-	50000	pF
Insertion Loss (Note 1)	IL	ESCC No. 3405 Frequency: 1MHz	13	-	dB
		Frequency: 2MHz (Note 2)	19	-	
		Frequency: 10MHz	30	-	
		Frequency: 30MHz (Note 2)	40	-	
		Frequency: 100MHz	45	-	

2.4.1.4 Room Temperature Electrical Measurements for Medium, Standard and High Frequency Filter Contacts

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance	R _i	ESCC No. 3405 Test voltage = 100V	10	-	GΩ
Voltage Proof	VP	ESCC No. 3405 Test current = 500μA	500	-	V
Contact Resistance at Low Level	R _{cl}	ESCC No. 3405	-	8.5	mΩ
Contact Resistance at Rated Current	R _{cr}	ESCC No. 3405	-	6	mΩ
Capacitance Medium Frequency Standard Frequency High Frequency	C	ESCC No. 3405 Test voltage: 0.1V _{rms} Frequency: 1 ±0.1kHz	4000 2300 500	12000 5000 1300	pF
Insertion Loss, Medium Frequency Filter Contacts (Note 1)	IL _M	ESCC No. 3405 Frequency: 1MHz Frequency: 2MHz (Note 2) Frequency: 10MHz Frequency: 30MHz (Note 2) Frequency: 100MHz	2 5 13 28 50	- - - - -	dB
Insertion Loss, Standard Frequency Filter Contacts (Note 1)	IL _S	ESCC No. 3405 Frequency: 2MHz Frequency: 10MHz (Note 2) Frequency: 30MHz Frequency: 100MHz (Note 2) Frequency: 500MHz	2 8 20 41 55	- - - - -	dB
Insertion Loss, High Frequency Filter Contacts (Note 1)	IL _H	ESCC No. 3405 Frequency: 10MHz Frequency: 30MHz (Note 2) Frequency: 100MHz Frequency: 500MHz (Note 2) Frequency: 1GHz	2 8 25 45 50	- - - - -	dB

2.4.1.5 Consolidated Notes

1. Measurements shall be made with no voltage or current applied.
2. Only measured during Qualification Testing per Chart F4 of ESCC Generic Specification No. 3405.

2.4.2 High Temperature Electrical Measurements

The measurements shall be performed at $T_{amb} = +125 (+0 -5)^{\circ}C$.

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance Low, Medium Frequency Standard, High Frequency	R_i	ESCC No. 3405 Test voltage = 100V	50 1000	- -	MΩ

2.4.3 Low Temperature Electrical Measurements

The measurements shall be performed at $T_{amb} = -55 (+5 -0)^{\circ}C$.

Characteristics	Symbols	Test Method and Conditions	Limits		Units
			Min	Max	
Insulation Resistance Low, Medium Frequency Standard, High Frequency	R_i	ESCC No. 3405 Test voltage = 100V	5 10	- -	GΩ

2.5 PARAMETER DRIFT VALUES

Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}C$.

The test methods and test conditions shall be as per the corresponding test defined in Para. 2.4.1, Room Temperature Electrical Measurements.

The drift values (Δ) shall not be exceeded for each characteristic where specified. The corresponding absolute limit values for each characteristic shall not be exceeded.

Characteristics	Symbols	Drift Value Δ	Units
Insulation Resistance Drift	$\Delta R_i / R_i$	-50	%
Capacitance Drift	$\Delta C / C$	± 20	%

2.6 INTERMEDIATE AND END-POINT ELECTRICAL MEASUREMENTS

Unless otherwise specified, the measurements shall be performed at $T_{amb} = +22 \pm 3^{\circ}\text{C}$.

Unless otherwise specified the test methods and test conditions shall be as per the corresponding test defined in Para. 2.4.1, Room Temperature Electrical Measurements.

Test Reference per ESCC No. 3405	Characteristics	Symbols	Limits		Units
			Min	Max	
Wiring	Insertion Loss	IL	See Para. 2.4.1		dB
Climatic Sequence	Insulation Resistance at +55°C (Note 1)	R_i	Note 2	-	MΩ
	Insertion Loss	IL	See Para. 2.4.1		dB
	Capacitance	C	See Para. 2.4.1		pF
	Insulation Resistance	R_i	See Para. 2.4.1		GΩ
	Voltage Proof	VP	See Para. 2.4.1		V
High Temperature Storage	Initial Measurements				
	Contact Resistance at Low Level	R_{cl}	See Para. 2.4.1		mΩ
	Ground Resistance	R_{cg}	See Para. 2.4.1		mΩ
	Capacitance	C	See Para. 2.4.1		pF
	Insulation Resistance	R_i	See Para. 2.4.1		GΩ
	Final Measurements				
	Contact Resistance at Low Level	R_{cl}	See Para. 2.4.1		mΩ
	Contact Resistance at Low Level Drift	ΔR_{cl}	-	3	mΩ
	Ground Resistance	R_{cg}	See Para. 2.4.1		mΩ
	Capacitance	C	See Para. 2.4.1		pF
	Capacitance Drift	$\Delta C/C$	See Para. 2.5		%
	Insertion Loss	IL	See Para. 2.4.1		dB
	Insulation Resistance	R_i	See Para. 2.4.1		GΩ
	Insulation Resistance Drift	$\Delta R_i/R_i$	See Para. 2.5		%
Voltage Proof	VP	See Para. 2.4.1		V	
Resistance to Soldering Heat	Insulation Resistance	R_i	See Para. 2.4.2		MΩ
	Insertion Loss	IL	See Para. 2.4.1		dB
Pin Bending Test	Capacitance	C_M & C_m	See Para. 2.4.1		pF
	Insulation Resistance	R_i	See Para. 2.4.1		GΩ
Rapid Change of Temperature	Insertion Loss	IL	See Para. 2.4.1		dB
	Capacitance	C	See Para. 2.4.1		pF
	Insulation Resistance	R_i	See Para. 2.4.1		GΩ
	Voltage Proof	VP	See Para. 2.4.1		V

Test Reference per ESCC No. 3405	Characteristics	Symbols	Limits		Units
			Min	Max	
Endurance Initial Measurements Final Measurements	Contact Resistance at Low Level	R _{cl}	See Para. 2.4.1		mΩ
	Ground Resistance	R _{cg}	See Para. 2.4.1		mΩ
	Capacitance	C	See Para. 2.4.1		pF
	Insulation Resistance	R _i	See Para. 2.4.1		GΩ
	Contact Resistance at Low Level	R _{cl}	See Para. 2.4.1		mΩ
	Contact Resistance at Low Level Drift	ΔR _{cl}	-	3	mΩ
	Ground Resistance	R _{cg}	See Para. 2.4.1		mΩ
	Insertion Loss	IL	See Para. 2.4.1		dB
	Capacitance	C	See Para. 2.4.1		pF
	Capacitance Drift	ΔC/C	See Para. 2.5		%
	Insulation Resistance	R _i	See Para. 2.4.1		GΩ
	Insulation Resistance Drift	ΔR _i /R _i	See Para. 2.5		%
	Voltage Proof	VP	See Para. 2.4.1		V
	Operating Life Initial Measurements Intermediate and Final Measurements (Note 3)	Capacitance	C	See Para. 2.4.1	
Insulation Resistance		R _i	See Para. 2.4.1		GΩ
Insulation Resistance		R _i	See Para. 2.4.2		MΩ
Insertion Loss		IL	See Para. 2.4.1		dB
Capacitance		C	See Para. 2.4.1		pF
Capacitance Drift		ΔC/C	See Para. 2.5		%
Insulation Resistance		R _i	See Para. 2.4.1		GΩ
Insulation Resistance Drift		ΔR _i /R _i	See Para. 2.5		%
Voltage Proof at 90% of rated voltage		VP	Note 4	-	V

NOTES:

1. Measured immediately after Damp Heat test.
2. 10% of the applicable limit specified in Para. 2.4.2.
3. Intermediate measurements, performed after 1000 ±24 hours, are applicable to Qualification Testing, and to Periodic Testing for renewal of qualification after lapse.
4. 90% of the limit specified in Para. 2.4.1.

2.7 BURN-IN CONDITIONS

Characteristics	Symbols	Conditions	Units
Ambient Temperature	T_{amb}	+125 (+0 -3)	°C
Applied Voltage	V_A	See Para. 1.5 Applied between contact and ground	V

2.8 OPERATING LIFE CONDITIONS

The conditions shall be as specified in Para. 2.7.