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DIODES, SILICON, FIELD EFFECT
CURRENT REGULATOR
BASED ON TYPES 1N5283 THROUGH 1N5314
ESCC Detail Specification No. 5107/022

ISSUE 1
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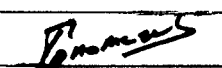
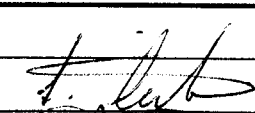
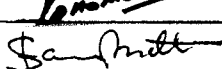
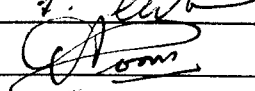
CURRENT REGULATOR



BASED ON TYPES 1N5283 THROUGH 1N5314

ESA/SCC Detail Specification No. 5107/022



**space components
coordination group**

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DOCUMENTATION CHANGE NOTICE

Rev. Letter	Rev. Date	Reference CHANGE Item	Approved DCR No.
'A'	July '93	<p>P1. Cover page P2. DCN P13. Para. 4.2.2 : PIND deviation amended P21. Table 3 : Note 3 deleted</p> <p>This document has been transferred from hardcopy to electronic format. The content is unchanged but minor differences in presentation exist.</p>	<p>None None 21043 21047</p>
'B'	Aug. '96	<p>P1. Cover page P2. DCN P3. T of C : Para. 1.7 entry added P5. Para. 1.7 : Paragraph added</p>	<p>None None 21083 21083</p>




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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 Diodes, Silicon, Field Effect Current Regulator, based on Types 1N5283 through 1N5314.

It shall be read in conjunction with ESA/SCC Generic Specification No. 5000, the requirements of which are supplemented herein.

1.2 **COMPONENT TYPE VARIANTS**

Variants of the basic diodes 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 diodes specified herein, are as scheduled in Table 1(b).

1.4 **PARAMETER DERATING INFORMATION**

The derating information applicable to the diodes specified herein is shown in Figure 1.

1.5 **PHYSICAL DIMENSIONS**

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

1.6 **FUNCTIONAL DIAGRAM**

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

1.7 **HIGH TEMPERATURE TEST PRECAUTIONS**

For tin-lead plated or solder-dipped lead finish, all tests to be performed at a temperature that exceeds +125°C shall be carried out in 100% inert atmosphere.

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TABLE 1(a) - TYPE VARIANTS

(1) Variant	(2) Based on Type	(3) I_p (mA)		(4) Z_Z Min. (M Ω)	(5) Z_K Min. (M Ω)	(6) V_L $I_L = 0.81p$ (min.) Max. (Vdc)	(7) TCI_p (%/°C) -55 to +25 °C		(8) TCI_p (%/°C) +25 to +150 °C		(9) Lead Material and Finish
		Min.	Max.				Min.	Max.	Min.	Max.	
01	1N5283	0.198	0.242	25.0	2.75	1.00	-0.20	1.15	-0.16	0.60	C2
02	1N5283	0.198	0.242	25.0	2.75	1.00	-0.20	1.15	-0.16	0.60	C3 or C4
03	1N5284	0.216	0.264	19.0	2.35	1.00	-0.20	1.05	-0.20	0.56	C2
04	1N5284	0.216	0.264	19.0	2.35	1.00	-0.20	1.05	-0.20	0.56	C3 or C4
05	1N5285	0.243	0.297	14.0	1.95	1.00	-0.30	0.95	-0.22	0.48	C2
06	1N5285	0.243	0.297	14.0	1.95	1.00	-0.30	0.95	-0.22	0.48	C3 or C4
07	1N5286	0.270	0.330	9.0	1.60	1.00	-0.35	0.85	-0.25	0.42	C2
08	1N5286	0.270	0.330	9.0	1.60	1.00	-0.35	0.85	-0.25	0.42	C3 or C4
09	1N5287	0.297	0.363	6.6	1.35	1.00	-0.40	0.75	-0.26	0.37	C2
10	1N5287	0.297	0.363	6.6	1.35	1.00	-0.40	0.75	-0.26	0.37	C3 or C4
11	1N5288	0.351	0.429	4.1	1.00	1.05	-0.50	0.62	-0.30	0.28	C2
12	1N5288	0.351	0.429	4.1	1.00	1.05	-0.50	0.62	-0.30	0.28	C3 or C4
13	1N5289	0.387	0.473	3.3	0.87	1.05	-0.52	0.55	-0.32	0.23	C2
14	1N5289	0.387	0.473	3.3	0.87	1.05	-0.52	0.55	-0.32	0.23	C3 or C4
15	1N5290	0.423	0.517	2.7	0.75	1.05	-0.55	0.50	-0.33	0.18	C2
16	1N5290	0.423	0.517	2.7	0.75	1.05	-0.55	0.50	-0.33	0.18	C3 or C4
17	1N5291	0.504	0.616	1.9	0.56	1.10	-0.60	0.35	-0.36	0.10	C2
18	1N5291	0.504	0.616	1.9	0.56	1.10	-0.60	0.35	-0.36	0.10	C3 or C4
19	1N5292	0.558	0.682	1.55	0.47	1.13	-0.62	0.25	-0.37	0.05	C2
20	1N5292	0.558	0.682	1.55	0.47	1.13	-0.62	0.25	-0.37	0.05	C3 or C4



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TABLE 1(a) - TYPE VARIANTS (CONT'D)

(1) Variant	(2) Based on Type	(3) I_p (mA)		(4) Z_Z Min. (M Ω)	(5) Z_K Min. (M Ω)	(6) V_L $I_L = 0.81p$ (min.) Max. (Vdc)	(7) TCI_p (%/°C) -55 to +25 °C		(8) TCI_p (%/°C) +25 to +150 °C		(9) Lead Material and Finish
		Min.	Max.				Min.	Max.	Min.	Max.	
21	1N5293	0.612	0.748	1.35	0.40	1.15	-0.65	0.20	-0.38	0.02	C2
22	1N5293	0.612	0.748	1.35	0.40	1.15	-0.65	0.20	-0.38	0.02	C3 or C4
23	1N5294	0.675	0.825	1.15	0.335	1.20	-0.70	0.15	-0.40	-0.03	C2
24	1N5294	0.675	0.825	1.15	0.335	1.20	-0.70	0.15	-0.40	-0.03	C3 or C4
25	1N5295	0.738	0.902	1.00	0.290	1.25	-0.72	0.07	-0.41	-0.07	C2
26	1N5295	0.738	0.902	1.00	0.290	1.25	-0.72	0.07	-0.41	-0.07	C3 or C4
27	1N5296	0.819	1.001	0.880	0.240	1.29	-0.76	0.0	-0.42	-0.10	C2
28	1N5296	0.819	1.001	0.880	0.240	1.29	-0.76	0.0	-0.42	-0.10	C3 or C4
29	1N5297	0.900	1.100	0.800	0.205	1.35	-0.78	-0.5	-0.44	-0.10	C2
30	1N5297	0.900	1.100	0.800	0.205	1.35	-0.78	-0.5	-0.44	-0.10	C3 or C4
31	1N5298	0.990	1.210	0.700	0.180	1.40	-0.80	-0.10	-0.46	-0.10	C2
32	1N5298	0.990	1.210	0.700	0.180	1.40	-0.80	-0.10	-0.46	-0.10	C3 or C4
33	1N5299	1.08	1.32	0.640	0.155	1.45	-0.83	-0.15	-0.47	-0.10	C2
34	1N5299	1.08	1.32	0.640	0.155	1.45	-0.83	-0.15	-0.47	-0.10	C3 or C4
35	1N5300	1.17	1.43	0.580	0.135	1.50	-0.85	-0.20	-0.48	-0.10	C2
36	1N5300	1.17	1.43	0.580	0.135	1.50	-0.85	-0.20	-0.48	-0.10	C3 or C4
37	1N5301	1.26	1.54	0.540	0.115	1.55	-0.88	-0.20	-0.49	-0.10	C2
38	1N5301	1.26	1.54	0.540	0.115	1.55	-0.88	-0.20	-0.49	-0.10	C3 or C4
39	1N5302	1.35	1.65	0.510	0.105	1.60	-0.90	-0.20	-0.50	-0.10	C2
40	1N5302	1.35	1.65	0.510	0.105	1.60	-0.90	-0.20	-0.50	-0.10	C3 or C4

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TABLE 1(a) - TYPE VARIANTS (CONT'D)

(1) Variant	(2) Based on Type	(3) I_p (mA)		(4) Z_Z Min. (M Ω)	(5) Z_K Min. (M Ω)	(6) V_L $I_L = 0.81p$ (min.) Max. (Vdc)	(7) TCI_p (%/°C) -55 to +25 °C		(8) TCI_p (%/°C) +25 to +150 °C		(9) Lead Material and Finish
		Min.	Max.				Min.	Max.	Min.	Max.	
41	1N5303	1.44	1.76	0.475	0.092	1.65	-0.90	-0.20	-0.50	-0.10	C2
42	1N5303	1.44	1.76	0.475	0.092	1.65	-0.90	-0.20	-0.50	-0.10	C3 or C4
43	1N5304	1.62	1.98	0.420	0.074	1.75	-0.92	-0.20	-0.51	-0.10	C2
44	1N5304	1.62	1.98	0.420	0.074	1.75	-0.92	-0.20	-0.51	-0.10	C3 or C4
45	1N5305	1.80	2.20	0.395	0.061	1.85	-0.95	-0.20	-0.52	-0.10	C2
46	1N5305	1.80	2.20	0.395	0.061	1.85	-0.95	-0.20	-0.52	-0.10	C3 or C4
47	1N5306	1.98	2.42	0.370	0.052	1.95	-0.96	-0.20	-0.52	-0.10	C2
48	1N5306	1.98	2.42	0.370	0.052	1.95	-0.96	-0.20	-0.52	-0.10	C3 or C4
49	1N5307	2.16	2.64	0.345	0.044	2.00	-0.98	-0.20	-0.53	-0.10	C2
50	1N5307	2.16	2.64	0.345	0.044	2.00	-0.98	-0.20	-0.53	-0.10	C3 or C4
51	1N5308	2.43	2.97	0.320	0.035	2.15	-1.00	-0.20	-0.53	-0.10	C2
52	1N5308	2.43	2.97	0.320	0.035	2.15	-1.00	-0.20	-0.53	-0.10	C3 or C4
53	1N5309	2.70	3.30	0.300	0.029	2.25	-1.01	-0.20	-0.53	-0.10	C2
54	1N5309	2.70	3.30	0.300	0.029	2.25	-1.01	-0.20	-0.53	-0.10	C3 or C4
55	1N5310	2.97	3.63	0.280	0.024	2.35	-1.02	-0.20	-0.54	-0.10	C2
56	1N5310	2.97	3.63	0.280	0.024	2.35	-1.02	-0.20	-0.54	-0.10	C3 or C4
57	1N5311	3.24	3.96	0.265	0.020	2.50	-1.03	-0.20	-0.54	-0.10	C2
58	1N5311	3.24	3.96	0.265	0.020	2.50	-1.03	-0.20	-0.54	-0.10	C3 or C4
59	1N5312	3.51	4.29	0.255	0.017	2.60	-1.04	-0.20	-0.55	-0.10	C2
60	1N5312	3.51	4.29	0.255	0.017	2.60	-1.04	-0.20	-0.55	-0.10	C3 or C4



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TABLE 1(a) - TYPE VARIANTS (CONT'D)

(1) Variant	(2) Based on Type	(3) I_P (mA)		(4) Z_Z Min. (M Ω)	(5) Z_K Min. (M Ω)	(6) V_L $I_L = 0.81p$ (min.) Max. (Vdc)	(7) TCI_p (%/°C) -55 to +25 °C		(8) TCI_p (%/°C) +25 to +150 °C		(9) Lead Material and Finish
		Min.	Max.				Min.	Max.	Min.	Max.	
61	1N5313	3.87	4.73	0.245	0.014	2.75	-1.05	-0.20	-0.55	-0.10	C2
62	1N5313	3.87	4.73	0.245	0.014	2.75	-1.05	-0.20	-0.55	-0.10	C3 or C4
63	1N5314	4.23	5.17	0.235	0.012	2.90	-1.06	-0.20	-0.55	-0.10	C2
64	1N5314	4.23	5.17	0.235	0.012	2.90	-1.06	-0.20	-0.55	-0.10	C3 or C4

TABLE 1(b) - MAXIMUM RATINGS

No.	CHARACTERISTICS	SYMBOL	MAXIMUM RATINGS	UNIT	REMARKS
1	Peak Operating Voltage	V_{pk}	100	V	
2	Reverse Current	I_R	200	mA	
3	Power Dissipation	P_{tot}	600	mW	Notes 1 and 2
4	Operating Temperature Range	T_L	– 55 to + 175	°C	
5	Storage Temperature Range	T_{stg}	– 65 to + 175	°C	
6	Soldering Temperature	T_{sol}	+ 260	°C	Note 3

NOTES

1. At $T_L = +75^\circ\text{C}$. For derating at $T_L > +75^\circ\text{C}$, see Figure 1.
2. Leads shall be maintained at ambient temperature 9.53mm from the body (Point T_L).
3. Duration ≤ 10 seconds, distance from case ≥ 1.5 mm and the same termination shall not be resoldered until 3 minutes have elapsed.

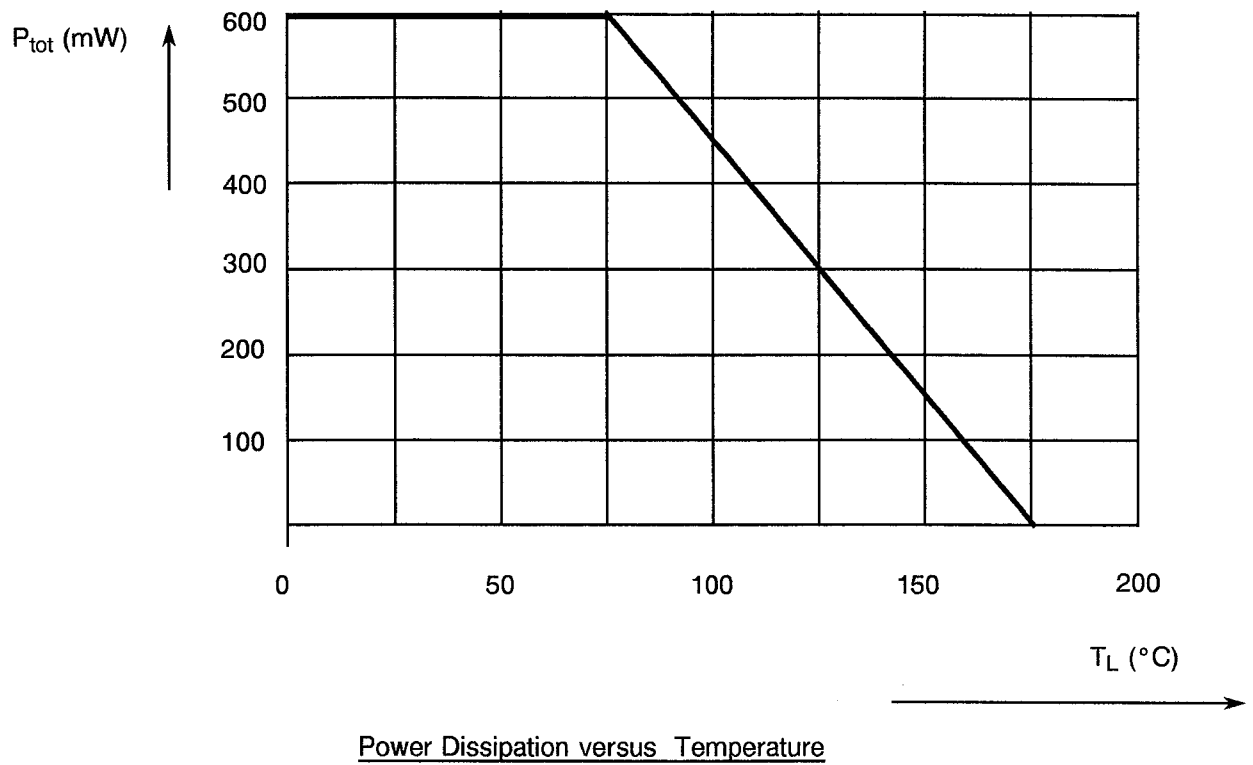
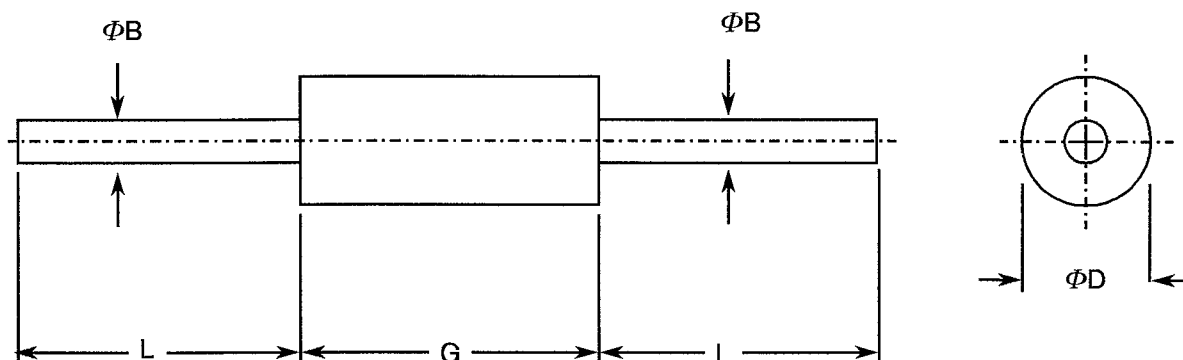
**FIGURE 1 - PARAMETER DERATING INFORMATION**

FIGURE 2 - PHYSICAL DIMENSIONS



SYMBOL	MILLIMETRES		INCHES		NOTES
	MIN.	MAX.	MIN.	MAX.	
ΦB	0.458	0.558	0.018	0.022	Notes 1 and 2
ΦD	2.159	2.178	0.085	0.107	
G	5.842	7.620	0.230	0.300	
L	25.40	38.10	1.00	1.500	

NOTES

1. The specified lead diameter applies in the zone between 1.27mm (0.050 inch) and 25.40mm (1.000 inch) from the diode body. Outside this zone, the lead diameter is not controlled.
2. Both leads shall be within the specified dimension.



FIGURE 3 - FUNCTIONAL DIAGRAM



1. Cathode
2. Anode

NOTES

1. The cathode end shall be marked with a coloured dot or band.

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2. **APPLICABLE DOCUMENTS**

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

- (a) ESA/SCC Generic Specification No. 5000 for Discrete Semiconductors.
- (b) MIL-STD-750, Test Methods and Procedures for Semiconductor Devices.

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

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

I_p = Pinch-Off Current.

V_S = Test Voltage.

TCI_p = Temperature Coefficient of Regulator Current.

4. **REQUIREMENTS**

4.1 **GENERAL**

The complete requirements for procurement of the diodes specified herein are stated in this specification and ESA/SCC Generic Specification No. 5000 for Discrete Semiconductors. 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 ESA/SCC 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)**

- (a) Para. 9.2.1, Bond Strength Test: Shall not be performed.
- (b) Para. 9.2.2, Die Shear Test: Shall not be performed.
- (c) Para. 9.7, Particle Impact Noise Detection (PIND) Test: Not applicable.

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

- (a) Para. 7.1.1(a), High Temperature Reverse Bias tests and subsequent electrical measurements related to this test shall be omitted.
- (b) Para. 9.12, Radiographic Inspection: Shall be performed if the body is not clear glass.

4.2.4 Deviations from Qualification Tests (Chart IV)

- (a) Para. 9.2.3, Bond Strength Test: Shall not be performed.
- (b) Para. 9.2.4, Die Shear Test: Shall not be performed.

4.2.5 Deviations from Lot Acceptance Tests (Chart V)

None.

4.3 MECHANICAL REQUIREMENTS**4.3.1** Dimension Check

The dimensions of the diodes specified herein shall be checked. They shall conform to those shown in Figure 2.

4.3.2 Weight

The maximum weight of the diodes specified herein shall be 0.25 grammes.



4.3.3 Terminal Strength

The requirements for terminal strength testing are specified in Section 9 of ESA/SCC Generic Specification No. 5000. The test conditions shall be as follows:-

Test Condition : 'A' (Tension).
Applied Force : 5.0 Newtons.
Duration : 10 seconds.

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 diodes 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.

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4.4.1 Case

The case shall be hermetically sealed and have a glass body.

4.4.2 Lead Material and Finish

The lead material shall be Type 'C' with either Type '2' or Type '3 or 4' finish in accordance with the requirements of ESA/SCC Basic Specification No. 23500. (See Table 1(a) for Type Variants).

4.5 MARKING

4.5.1 General

The marking of all components delivered to this specification shall be in accordance with the requirements of ESA/SCC Basic Specification No. 21700. Each component shall be marked in respect of:-

- (a) Lead Identification.
- (b) The SCC Component Number.
- (c) Traceability Information.

4.5.2 Lead Identification

Lead identification shall be as shown in Figure 3.


4.5.3 The SCC Component Number

Each component shall bear the SCC Component Number which shall be constituted and marked as follows:

Detail Specification Number	_____	510702202B
Type Variant (see Table 1(a))	_____	
Testing Level (B or C, as applicable)	_____	

4.5.4 Traceability Information

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

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4.5.5 Marking of Small Components

When it is considered that the component is too small to accommodate the marking as specified above, as much as space permits shall be marked. The order of precedence shall be as follows:-

- (a) Lead Identification.
- (b) The SCC Component Number.
- (c) Traceability Information.

The marking information in full shall accompany each component in its primary package.

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, the 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.



4.6.3 Circuits for Electrical Measurements

Circuits for use in performing the electrical measurements listed in Tables 2 and 3 of this specification are shown in Figure 4.

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, the measurements shall be performed at $T_{amb} = +22 \pm 3$ °C. The parameter drift value (Δ) applicable to the parameters scheduled, shall not be exceeded. In addition to these drift value requirements, the appropriate limit value specified for a given parameter in Table 2 shall not be exceeded.

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4.7.2 Conditions for Power Burn-in

The requirements for power burn-in are specified in Section 7 of ESA/SCC Generic Specification No. 5000. The conditions for power burn-in shall be as specified in Table 5 of this specification.

4.7.3 Electrical Circuits for Power Burn-in

Circuits for use in performing the power burn-in tests are shown in Figure 5 of this specification.



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TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE - d.c. PARAMETERS

No.	CHARACTERISTICS	SYMBOL	TEST FIGURE	TEST CONDITIONS	LIMITS		UNIT
					MIN.	MAX.	
1	Regulator Current	I_p	4(a)	$V_S = 25V_{dc}$	(1)	(1)	mA
2	Limiting Voltage	V_L	4(b)	$I_L = 0.8 I_p$ (min) See Note 1	-	(2)	V

TABLE 2 - ELECTRICAL MEASUREMENTS AT ROOM TEMPERATURE - a.c. PARAMETERS

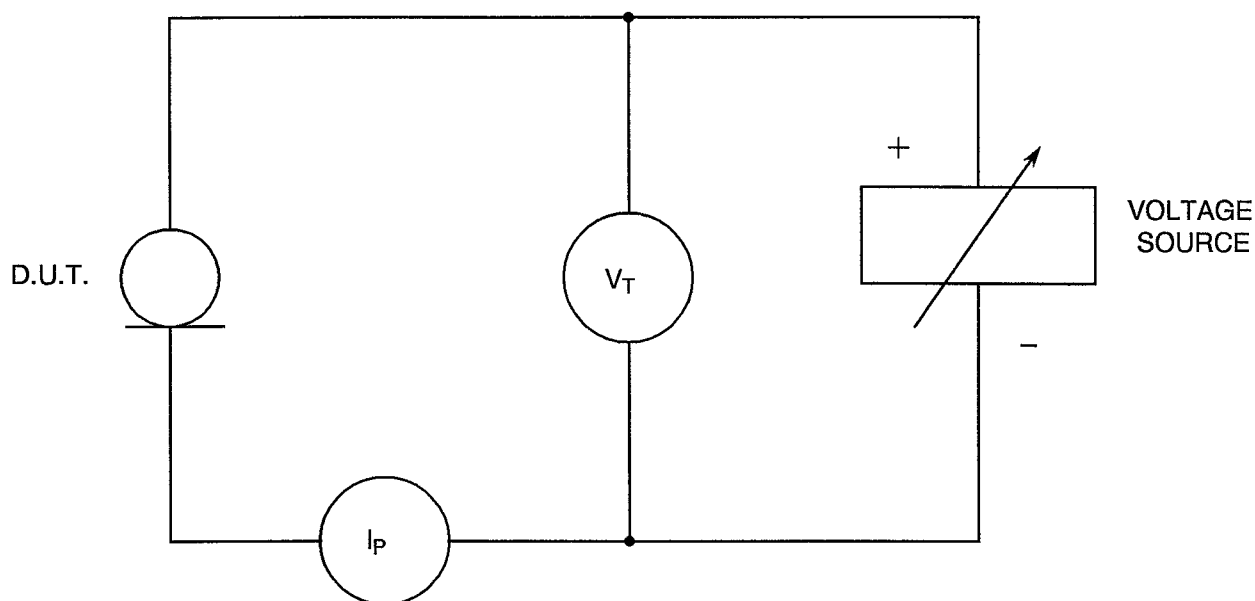
No.	CHARACTERISTICS	SYMBOL	TEST FIGURE	TEST CONDITIONS	LIMITS		UNIT
					MIN.	MAX.	
3	Dynamic Impedance	Z_Z	4(c)	$V_S = 25V_{dc}$	(3)	-	$M\Omega$
4	Knee Impedance	Z_K	4(d)	$V_K = 6.0V_{dc}$	(4)	-	$M\Omega$

NOTES

1. See Column 3 of Table 1(a).
2. See Column 6 of Table 1(a).
3. See Column 4 of Table 1(a).
4. See Column 5 of Table 1(a).
5. Measurements shall be performed on a sample basis LTPD = 7 or less.

FIGURE 4 - CIRCUITS FOR ELECTRICAL MEASUREMENTS

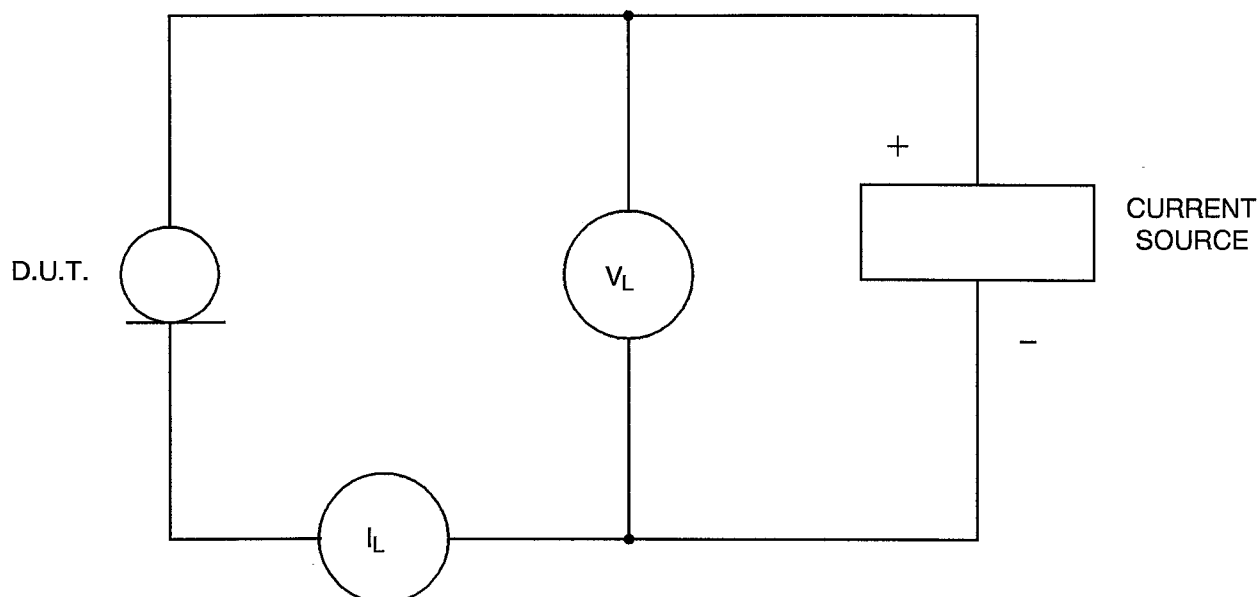
FIGURE 4(a) - REGULATOR CURRENT



NOTES

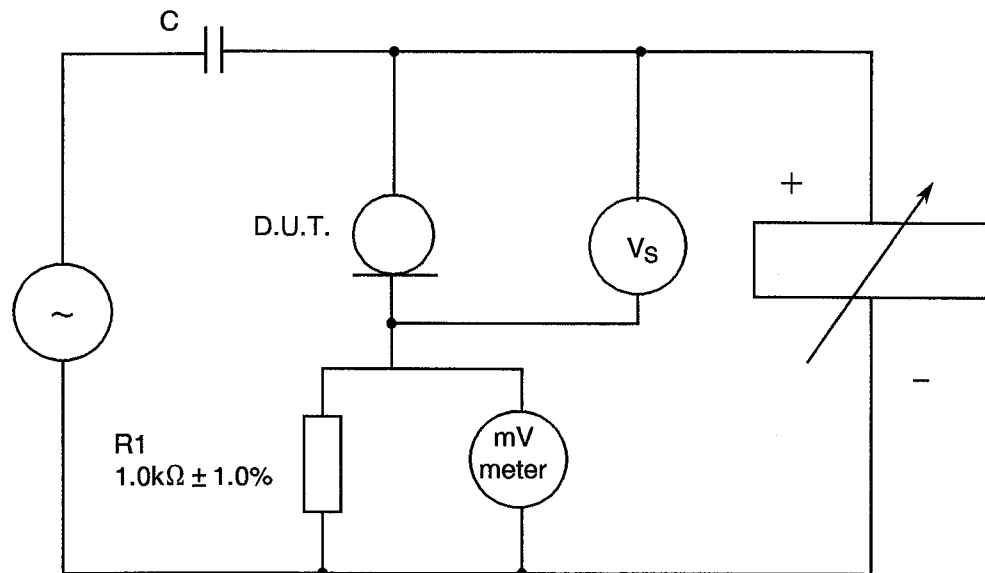
1. Adjust voltage source to 25Vdc.
2. Measure current I_p .
3. The ammeter shall represent essentially a short-circuit to the terminals between which the current is being measured. If not, the voltmeter reading shall be corrected for the drop across the ammeter.

FIGURE 4(b) - LIMITING VOLTAGE

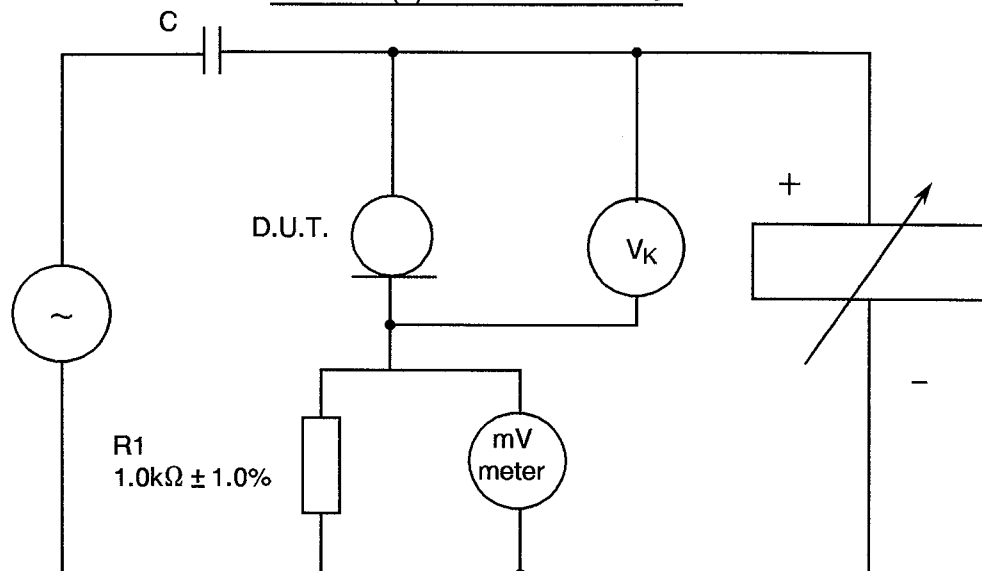


NOTES

1. Adjust current source to I_L of Table 1(a), Column 6.
2. Measure voltage V_L .
3. The ammeter shall represent essentially a short-circuit to the terminals between which the current is being measured. If not, the voltmeter reading shall be corrected for the drop across the ammeter.

**FIGURE 4 - CIRCUITS FOR ELECTRICAL MEASUREMENTS (CONTINUED)****FIGURE 4(c) - DYNAMIC IMPEDANCE****NOTES**

1. Adjust voltage source to 25Vdc.
2. Apply an a.c. signal of 2.5Vrms at 90Hz through an isolating capacitor C.
3. Measure the a.c. rms voltage.
4. $Z_Z = V_S \text{ mod } \frac{R1}{V_{ac}}$ where $V_S \text{ mod}$ equals a.c. signal for Note 2 and V_{ac} equals the voltage across R1.

FIGURE 4(d) - KNEE IMPEDANCE**NOTES**

1. Adjust voltage source to 6.0Vdc.
2. Apply an a.c. signal of 0.6Vrms at 90Hz through an isolating capacitor C.
3. Measure the a.c. rms voltage.
4. $Z_Z = V_K \text{ mod } \frac{R1}{V_{ac}}$ where $V_K \text{ mod}$ equals a.c. signal for Note 2 and V_{ac} equals the voltage across R1.



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TABLE 3 - ELECTRICAL MEASUREMENTS AT HIGH AND LOW TEMPERATURES

No.	CHARACTERISTICS	SYMBOL	TEST METHOD MIL-STD-750	TEST CONDITIONS	LIMITS		UNIT
					MIN.	MAX.	
5	Temperature Coefficient of Regulator Current	TCI_p	4071	$V_S = 25V$ $T_{amb} = +25/+150^{\circ}C$	(1)	(1)	%/ $^{\circ}C$
6	Temperature Coefficient of Regulator Current	TCI_p	4071	$V_S = 25V$ $T_{amb} = -55/+25^{\circ}C$	(2)	(2)	%/ $^{\circ}C$

NOTES

1. See Column 8 of Table 1(a).
2. See Column 7 of Table 1(a).

TABLE 4 - PARAMETER DRIFT VALUES

No.	CHARACTERISTICS	SYMBOL	SPEC. AND/OR TEST METHOD	TEST CONDITIONS	CHANGE LIMITS (Δ)	UNIT
1	Regulator Current	I_p	As per Table 2	As per Table 2	± 5.0 or (1) ± 2.0	μA %

NOTES



1. Whichever is the greater, referred to the initial value.

TABLE 5 - CONDITIONS FOR POWER BURN-IN AND OPERATING LIFE TEST

No.	CHARACTERISTICS	SYMBOL	CONDITION	UNIT
1	Ambient Temperature	T_{amb}	+ 150 (+ 0-3)	°C
2	Peak Voltage	V_{pk}	25	V

FIGURE 5 - ELECTRICAL CIRCUIT FOR POWER BURN-IN AND OPERATING LIFE TEST

Not applicable.

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4.8 ENVIRONMENTAL AND ENDURANCE TESTS (CHARTS IV AND V OF ESA/SCC GENERIC SPECIFICATION NO. 5000)

4.8.1 Electrical Measurements on Completion of Environmental Tests

The parameters to be measured on completion of environmental tests are scheduled in Table 2. The measurements shall be performed at $T_{amb} = +22 \pm 3 \text{ }^{\circ}\text{C}$.

4.8.2 Electrical Measurements at Intermediate Points and on Completion of Endurance Tests

The parameters to be measured at intermediate points and on completion of endurance testing are scheduled in Table 6. The measurements shall be performed at $T_{amb} = +22 \pm 3 \text{ }^{\circ}\text{C}$.

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

The requirements for operating life testing are specified in Section 9 of ESA/SCC Generic Specification No. 5000. The conditions for operating life testing shall be the same as specified in Table 5 for the power burn-in.

4.8.4 Electrical Circuits for Operating Life Tests (Figure 5)

Not applicable.

4.8.5 Conditions for High Temperature Storage Test (Part of Endurance Testing)

The requirements for the high temperature storage test are specified in ESA/SCC Generic Specification No. 5000. The temperature to be applied shall be the maximum storage temperature specified in Table 1(b) of this specification.



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TABLE 6 - ELECTRICAL MEASUREMENTS AT INTERMEDIATE POINTS AND ON COMPLETION OF ENDURANCE TESTING

No.	CHARACTERISTICS	SYMBOL	SPEC. AND/OR TEST METHOD	TEST CONDITIONS	LIMITS		UNIT
					MIN.	MAX.	
1	Regulator Current	I_p	As per Table 2	As per Table 2	(1)	(1)	mA
2	Dynamic Impedance	Z_Z	As per Table 2	As per Table 2	(2)	-	MΩ

NOTES

1. See Column 3 of Table 1(a).
2. See Column 4 of Table 1(a).