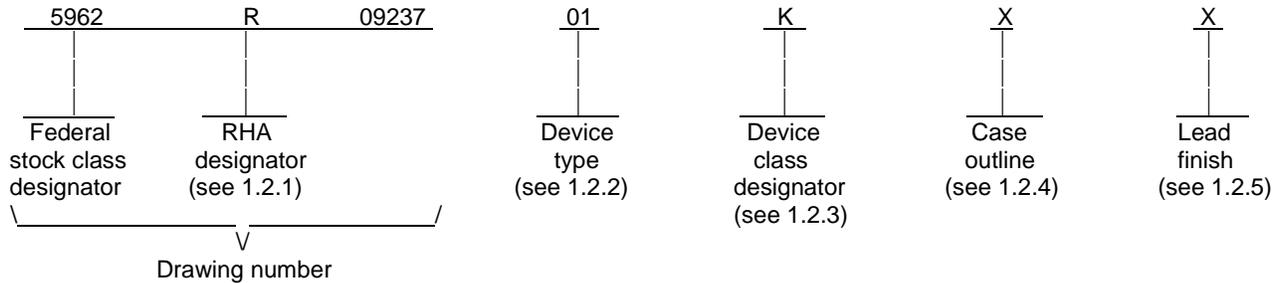


1. SCOPE

1.1 Scope. This drawing documents five product assurance classes as defined in paragraph 1.2.3 and MIL-PRF-38534. A choice of case outlines and lead finishes which are available and are reflected in the Part or Identifying Number (PIN). When available, a choice of radiation hardness assurance levels are reflected in the PIN.

1.2 PIN. The PIN shall be as shown in the following example:



1.2.1 Radiation hardness assurance (RHA) designator. RHA marked devices shall meet the MIL-PRF-38534 specified RHA levels and shall be marked with the appropriate RHA designator. A dash (-) indicates a non-RHA device.

1.2.2 Device type(s). The device type(s) identify the circuit function as follows:

<u>Device type</u>	<u>Generic number</u>	<u>Circuit function</u>
01	VRG8691, VRG8692	Voltage regulator, positive, low dropout, adjustable

1.2.3 Device class designator. This device class designator shall be a single letter identifying the product assurance level. All levels are defined by the requirements of MIL-PRF-38534 and require QML Certification as well as qualification (Class H, K, and E) or QML Listing (Class G and D). The product assurance levels are as follows:

<u>Device class</u>	<u>Device performance documentation</u>
K	Highest reliability class available. This level is intended for use in space applications.
H	Standard military quality class level. This level is intended for use in applications where non-space high reliability devices are required.
G	Reduced testing version of the standard military quality class. This level uses the Class H screening and In-Process Inspections with a possible limited temperature range, manufacturer specified incoming flow, and the manufacturer guarantees (but may not test) periodic and conformance inspections (Group A, B, C and D).
E	Designates devices which are based upon one of the other classes (K, H, or G) with exception(s) taken to the requirements of that class. These exception(s) must be specified in the device acquisition document; therefore the acquisition document should be reviewed to ensure that the exception(s) taken will not adversely affect system performance.
D	Manufacturer specified quality class. Quality level is defined by the manufacturers internal, QML certified flow. This product may have a limited temperature range.

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1.2.4 Case outline(s). The case outline(s) are as designated in MIL-STD-1835 and as follows:

<u>Outline letter</u>	<u>Descriptive designator</u>	<u>Terminals</u>	<u>Package style</u>
X	See figure 1	12	Thru-Hole
Y	See figure 1	12	Surface Mount

1.2.5 Lead finish. The lead finish shall be as specified in MIL-PRF-38534.

1.3 Absolute maximum ratings. 1/

V_{BIAS}, V_{IN}	+7.0 V
Power.....	25 W 2/
Junction temperature (T_J)	+150°C
Thermal resistance, junction-to-case (θ_{JC}).....	1°C/W
Lead temperature (soldering, 10 seconds)	300°C
Storage temperature range.....	-65°C to +150°C

1.4 Recommended operating conditions.

Output voltage range	+0.985 V to +4.5 V dc
Output current range	0 to 7.5 A
Voltage Bias (V_{BIAS}) range.....	+3.3 V to +5.5 V dc 3/
Voltage Input (V_{IN}) range.....	+1.8 V to +5.5 V dc
Case operating temperature range (T_C)	-55°C to +125°C

1.5 Radiation features. 4/ 5/

Maximum Total Ionizing Dose (TID) ..(dose rate = 50 - 300 rad(Si)/s)	100 krad(Si) 6 7/
Single event phenomenon (SEP) effective linear energy transfer (LET): No SEL, SEU, or SET.....	$\leq 86 \text{ MeV-cm}^2/\text{mg}$ 8/

2. APPLICABLE DOCUMENTS

2.1 Government specification, standards, and handbooks. The following specification, standards, and handbooks form a part of this drawing to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-38534 - Hybrid Microcircuits, General Specification for.

- 1/ Stresses above the absolute maximum ratings may cause permanent damage to the device. Extended operation at the maximum levels may degrade performance and affect reliability.
- 2/ Based on pass transistor limitations of $(V_{IN} - V_O) \times I_O$ and $\theta_{JC} \leq 1^\circ\text{C/W}$ with 25°C max T_J rise at $T_C = +125^\circ\text{C}$.
- 3/ V_{BIAS} must maintain a level equal or above V_{IN} but not fall below +3.3 V.
- 4/ See section 4.3.5 for the manufacturer's radiation hardness assurance analysis and testing.
- 5/ Bipolar device types may degrade from displacement damage from radiation which could affect RHA levels. This device has not been characterized for displacement damage.
- 6/ This device was tested initially using Condition A, Method 1019 of MIL-STD-883 to 500 krad(Si) to assure Radiation Hardness Assurance designator level "R". The device will be re-tested after design or process changes that may affect the RHA response of the device.
- 7/ This device may be dose rate sensitive in a space environment and may demonstrate enhanced low dose rate effects. Radiation end-point limits for the noted parameters are guaranteed only for the conditions as specified in MIL-STD-883, method 1019, condition A for these parameters.
- 8/ Single event testing performed at 86 MeV-cm²/mg with no single event latch up, no single event upset and no single event transients observed. See table IB herein.

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DEPARTMENT OF DEFENSE STANDARDS

- MIL-STD-883 - Test Method Standard Microcircuits.
- MIL-STD-1835 - Interface Standard Electronic Component Case Outlines.

DEPARTMENT OF DEFENSE HANDBOOKS

- MIL-HDBK-103 - List of Standard Microcircuit Drawings.
- MIL-HDBK-780 - Standard Microcircuit Drawings.

(Copies of these documents are available online at <http://quicksearch.dla.mil> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM F1192 - Standard Guide for the Measurement of Single Event Phenomena (SEP) Induced by Heavy Ion Irradiation of Semiconductor Devices.

(Copies of these documents are available online at <http://www.astm.org> or from the American Society for Testing and Materials, P O Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959)

2.2 Order of precedence. In the event of a conflict between the text of this drawing and the references cited herein, the text of this drawing takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Item requirements. The individual item performance requirements for device classes D, E, G, H, and K shall be in accordance with MIL-PRF-38534. Compliance with MIL-PRF-38534 shall include the performance of all tests herein or as designated in the device manufacturer's Quality Management (QM) plan or as designated for the applicable device class. The manufacturer may eliminate, modify or optimize the tests and inspections herein, however the performance requirements as defined in MIL-PRF-38534 shall be met for the applicable device class. In addition, the modification in the QM plan shall not affect the form, fit, or function of the device for the applicable device class.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38534 and herein.

3.2.1 Case outline(s). The case outline(s) shall be in accordance with 1.2.4 herein and figure 1.

3.2.2 Terminal connections. The terminal connections shall be as specified on figure 2.

3.2.3 Block diagram. The block diagram shall be as specified on figure 3.

3.2.4 Radiation exposure circuits. The radiation exposure circuits shall be maintained by the manufacturer under document revision level control and shall be made available to the preparing and acquiring activity upon request.

3.3 Electrical performance characteristics. Unless otherwise specified herein, the electrical performance characteristics are as specified in table I and shall apply over the full specified operating temperature range.

3.4 Electrical test requirements. The electrical test requirements shall be the subgroups specified in table II. The electrical tests for each subgroup are defined in table IA.

3.5 Marking of device(s). Marking of device(s) shall be in accordance with MIL-PRF-38534. The device shall be marked with the PIN listed in 1.2 herein. In addition, the manufacturer's vendor similar PIN may also be marked.

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3.6 Data. In addition to the general performance requirements of MIL-PRF-38534, the manufacturer of the device described herein shall maintain the electrical test data (variables format) from the initial quality conformance inspection group A lot sample, for each device type listed herein. Also, the data should include a summary of all parameters manually tested, and for those which, if any, are guaranteed. This data shall be maintained under document revision level control by the manufacturer and be made available to the preparing activity (DLA Land and Maritime -VA) upon request.

3.7 Certificate of compliance. A certificate of compliance shall be required from a manufacturer in order to supply to this drawing. The certificate of compliance (original copy) submitted to DLA Land and Maritime -VA shall affirm that the manufacturer's product meets the performance requirements of MIL-PRF-38534 and herein.

3.8 Certificate of conformance. A certificate of conformance as required in MIL-PRF-38534 shall be provided with each lot of microcircuits delivered to this drawing.

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with MIL-PRF-38534 or as modified in the device manufacturer's Quality Management (QM) plan. The modification in the QM plan shall not affect the form, fit, or function as described herein.

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TABLE IA. Electrical performance characteristics.

Test	Symbol	Conditions <u>1/</u> -55°C ≤ T _C ≤ +125°C V _{BIAS} = V _{IN} = 5 V, <u>ENABLE</u> = 0 V _{OUT} = 3.3 V, I _{OUT} = 7.5 A unless otherwise specified	Group A subgroups	Device types	Limits		Unit
					Min	Max	
POSITIVE REGULATOR							
Reference voltage <u>2/</u>	V _{REF}	V _{IN} = V _{BIAS} = 5 V, 0 A ≤ I _{OUT} ≤ 7.5 A	1,2,3	01	0.985	1.015	V
Line regulation <u>2/</u>	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$	2 V ≤ V _{IN} ≤ 3 V, V _{OUT} = 1.0 V, C _{IN} ≥ 47 μF, C _{OUT} ≥ 47 μF	1,2,3	01		0.2	%V
		4.3 V ≤ V _{IN} ≤ 5.3 V, V _{OUT} = 3.3 V, C _{IN} ≥ 47 μF, C _{OUT} ≥ 47 μF					
Load regulation <u>2/</u>	$\frac{\Delta V_{OUT}}{\Delta I_{OUT}}$	0 A ≤ I _{OUT} ≤ 7.5 A, C _{IN} ≥ 47 μF, C _{OUT} ≥ 47 μF	1,2,3	01		0.5	%
Thermal resistance <u>3/</u> (Junction to Case)	θ _{JC}		1,2,3	01		1	°C/W
Dropout voltage <u>2/</u>	V _{DROP}	ΔV _{OUT} = 1%, 0 A ≤ I _{OUT} ≤ 7.5 A	1,2,3	01		0.5	V
Ripple rejection ratio <u>2/</u>		f = 120 Hz, C _{LOAD} = 47 μF, V _{IN} + V _{RIP} > V _{OUT} + V _{DROP(MAX)} at 5 A, V _{IN} = 4.3V, V _{RIP} = 1 V _{P-P} , V _{OUT} = 3.3V	4,5,6	01	80		dB
Adjustment pin current <u>2/</u>	I _{ADJ}		1,2,3	01		3	μA
Minimum load current <u>2/</u>	I _{MIN}		1,2,3	01		0	mA
Current limit <u>2/</u>	I _{MAX}	Pin 8 open	1,2,3	01	9.5	13.5	A
Long term stability <u>4/</u>	$\frac{\Delta V_{OUT}}{\Delta TIME}$		1,2,3	01		1	%
Supply current (V _{BIAS})	I _{BIAS}		1,2,3	01		15	mA

- 1/ This device was characterized and tested initially using Condition A, Method 1019 of MIL-STD-883 through all levels P, L, R, F and G (500 krad(Si)) of irradiation to assure Radiation Hardness Assurance designator level "R" (100 krad(Si)). The device will be re-tested after design or process changes that may affect the RHA response of the device.
- 2/ This device may be dose rate sensitive in a space environment and may demonstrate enhanced low dose rate effect. Radiation end-point limits for the noted parameters are guaranteed only for the conditions as specified in MIL-STD-883, method 1019, condition A.
- 3/ Guaranteed by design.
- 4/ Not tested. Parameter shall be guaranteed to the specified limits after 1000 hour life test.

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TABLE IB. SEP test limits. 1/

Device type	SEP	Temperature (T _c)	Effective linear energy transfer (LET)
01	No SEL	+125°C	≤ 86 MeV-cm ² /mg
01	No SEU	+25°C	≤ 86 MeV-cm ² /mg
01	No SET	+25°C	≤ 86 MeV-cm ² /mg

1/ For SEP test conditions, see 4.3.5.1.1.2 herein.

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Case X.

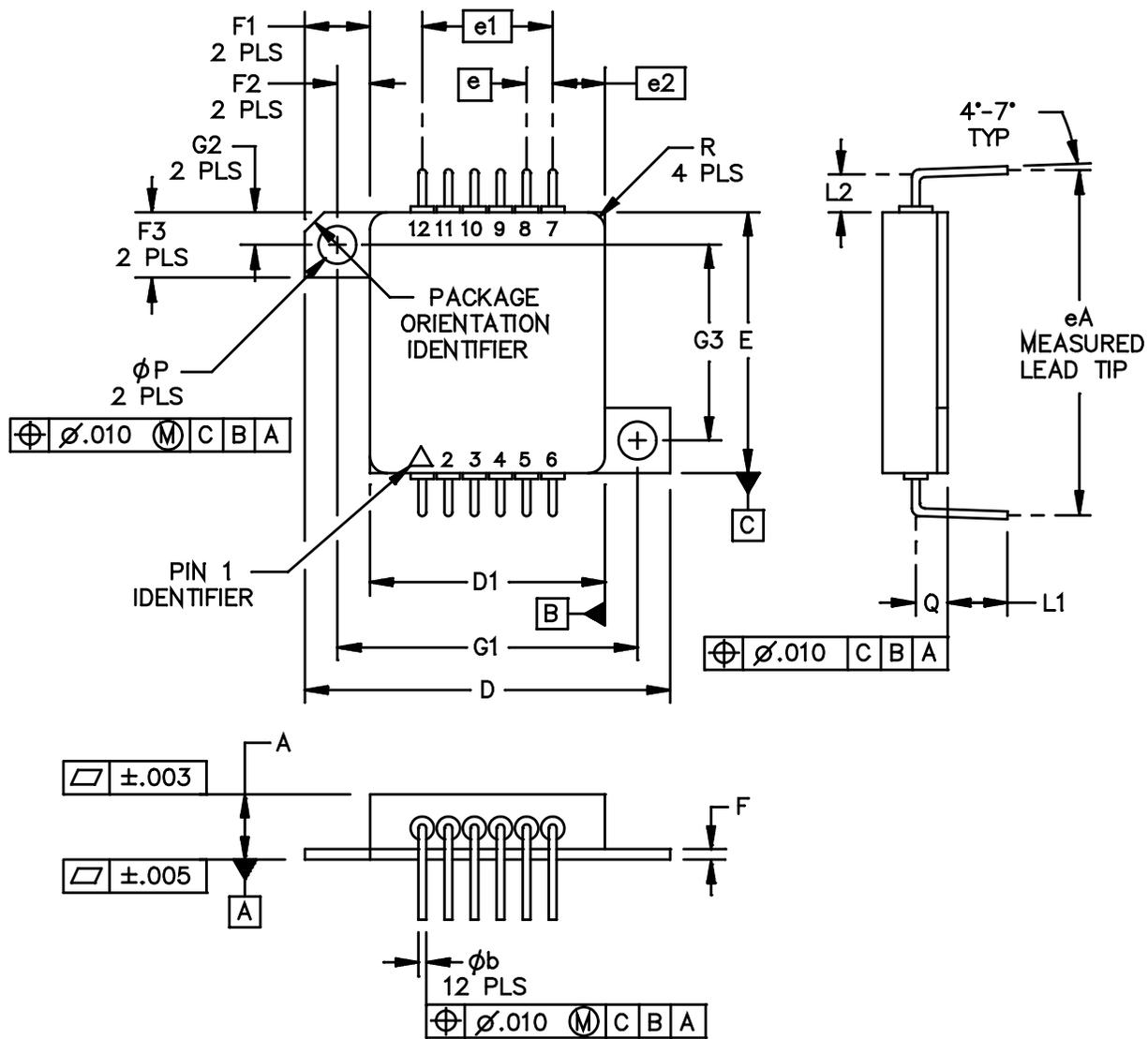


FIGURE 1. Case outline(s).

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Case X - Continued.

Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A		.220		5.60
∅b	.028	.032	.71	.81
D	1.395	1.405	35.43	35.69
D1	.895	.905	22.73	22.99
e	.100 BSC		2.54 BSC	
e1	.500 BSC		12.70 BSC	
e2	.200 BSC		5.08 BSC	
eA	1.285	1.325	32.64	33.66
E	.995	1.005	25.27	25.53
F	.035	.045	.89	1.14
F1	.245	.255	6.22	6.48
F2	.120	.130	3.05	3.30
F3	.245	.255	6.22	6.48
G1	1.145	1.155	29.08	29.34
G2	.120	.130	3.05	3.30
G3	.745	.755	18.92	19.18
L1	.230		5.84	
L2	.150 REF		3.81 REF	
Q	.122 TYP		3.10 TYP	
∅p	.140	.150	3.56	3.81
R	.065 TYP		1.65 TYP	

NOTES:

1. The U.S. preferred system of measurement is the metric SI. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.
2. The package contains a BeO substrate.
3. The case is electrically isolated.

FIGURE 1. Case outline(s) - Continued.

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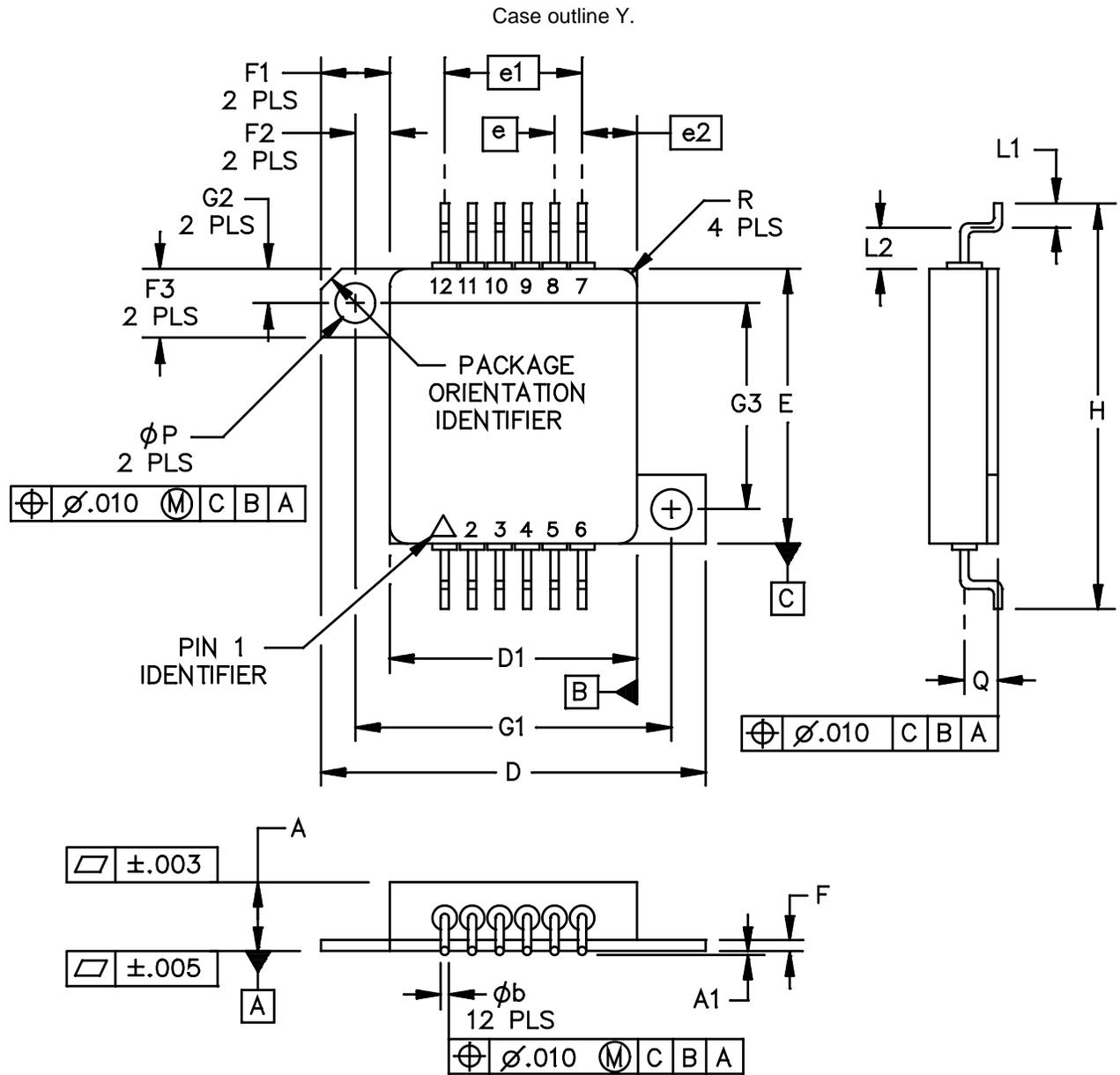


FIGURE 1. Case outline(s) - Continued.

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Case outline Y - continued.

Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A		.222		5.64
A1	.010	.020	0.25	0.51
Øb	.028	.032	0.71	0.81
D	1.395	1.405	35.43	35.69
D1	.895	.905	22.73	22.98
e	.100 BSC		2.54 BSC	
e1	.500 BSC		12.70 BSC	
e2	.200 BSC		5.08 BSC	
E	.995	1.005	25.27	25.53
F	.035	.045	.89	1.14
F1	.245	.255	6.22	6.48
F2	.120	.130	3.05	3.30
F3	.245	.255	6.22	6.48
G1	1.145	1.155	29.08	29.34
G2	.120	.130	3.05	3.30
G3	.745	.755	18.92	19.18
H	1.456	1.496	36.98	38.00
L1	.055	.065	1.40	1.65
L2	.150 REF		3.81 REF	
Øp	.140	.150	3.56	3.81
Q	.122 TYP		3.10 TYP	
R	.065 TYP		1.65 TYP	

NOTES:

1. The U.S. preferred system of measurement is the metric SI. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.
2. The package contains a BeO substrate.
3. The case is electrically isolated.

FIGURE 1. Case outline(s) - Continued.

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Device type	01
Case outlines	X and Y
Terminal number	Terminal symbol
1	V_{IN}
2	V_{IN}
3	V_{IN}
4	V_{BIAS}
5	\overline{ENABLE}
6	GROUND
7	SLOW_START
8	CURRENT_LIMIT
9	V_{SENSE}
10	V_{OUT}
11	V_{OUT}
12	V_{OUT}

FIGURE 2. Terminal connections.

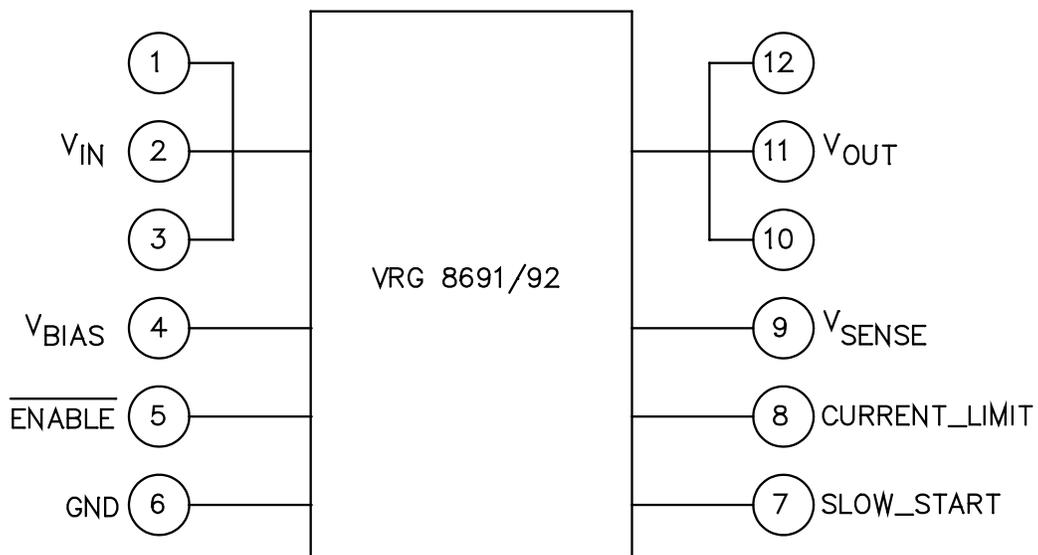


FIGURE 3. Block diagram.

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TABLE II. Electrical test requirements.

MIL-PRF-38534 test requirements	Subgroups (in accordance with MIL-PRF-38534, group A test table)
Interim electrical parameters	1
Final electrical parameters	1*,2,3
Group A test requirements	1,2,3
Group C end-point electrical parameters	1,2,3
End-point electrical parameters for Radiation Hardness Assurance (RHA) devices	1

* PDA applies to subgroup 1.

4.2 Screening. Screening shall be in accordance with MIL-PRF-38534. The following additional criteria shall apply:

a. Burn-in test, method 1015 of MIL-STD-883.

- (1) Test condition A, B, C, or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to either DLA Land and Maritime -VA or the acquiring activity upon request. Also, the test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in method 1015 of MIL-STD-883.
- (2) T_C as specified in accordance with table I of method 1015 of MIL-STD-883.

b. Interim and final electrical test parameters shall be as specified in table II herein, except interim electrical parameter tests prior to burn-in are optional at the discretion of the manufacturer.

4.3 Conformance and periodic inspections. Conformance inspection (CI) and periodic inspection (PI) shall be in accordance with MIL-PRF-38534 and as specified herein.

4.3.1 Group A inspection (CI). Group A inspection shall be in accordance with MIL-PRF-38534 and as follows:

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, 6, 7, 8A, 8B, 9, 10, and 11 shall be omitted.

4.3.2 Group B inspection (PI). Group B inspection shall be in accordance with MIL-PRF-38534.

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4.3.3 Group C inspection (PI). Group C inspection shall be in accordance with MIL-PRF-38534 and as follows:

- a. End-point electrical parameters shall be as specified in table II herein.
- b. Steady-state life test, method 1005 of MIL-STD-883.
 - (1) Test condition A, B, C, or D. The test circuit shall be maintained by the manufacturer under document revision level control and shall be made available to either DLA Land and Maritime -VA or the acquiring activity upon request. Also, the test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in method 1005 of MIL-STD-883.
 - (2) T_C as specified in accordance with table I of method 1005 of MIL-STD-883.
 - (3) Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

4.3.4 Group D inspection (PI). Group D inspection shall be in accordance with MIL-PRF-38534.

4.3.5. Radiation hardness assurance (RHA). RHA qualification is required only for those devices with the RHA designator as specified herein. See table IIIA and IIIB.

Table IIIA. Radiation Hardness Assurance Methods Table.

RHA method Employed	Testing at rated total dose of (100 krad)		Worst Case Analysis Performed				End point electricals after total dose	
	Element Level	Hybrid Device Level	Includes temperature effects	Combines temperature and radiation effects	Combines total dose and displacement effects	End-of-life	Element Level	Hybrid device level
	1X	1.5X	Yes	Yes	No	Yes <u>1/</u>	T _C = +25°C	T _C = +25°C

1/ Worst case analysis performed with case temperatures from -55°C to +125°C, for 10 years of full time operation

Table IIIB. Hybrid level and element level test table.

	Radiation test					
	Total Ionizing Dose			Heavy Ion		
	Hybrid Level Testing					
	Low Dose Rate	High Dose Rate (HDR)	ELDRS Characterization	SET Transient	SEU (upset)	SEL (latch-up)
	Not tested	Tested (150 krad)	No	Tested (86 MeV-cm ² /mg)	Tested (86 MeV-cm ² /mg)	Tested (86 MeV-cm ² /mg)
Element-Level Testing						
CMOS IC	<u>2/</u>	Tested (2 Mrad)	<u>2/</u>	No	No	No
Bipolar Discrete Devices	Not tested	Tested (100 krad)	No	No	No	No
Bipolar Linear or Mixed Signal > 90 nm	Not tested	Tested (100 krad)	No	No	No	No

2/ CMOS is immune to ELDRS, not tested.

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4.3.5.1 Radiation Hardness Assurance (RHA) inspection. RHA qualification is required for those devices with the RHA designator as specified herein. End-point electrical parameters for radiation hardness assurance (RHA) devices shall be specified in table II. Radiation testing will be in accordance with the qualifying activity (DLA Land and Maritime-VQ) approved plan and with MIL-PRF-38534, Appendix G.

- a. The hybrid device manufacturer shall establish procedures controlling element radiation testing, and shall establish radiation test plans used to implement element lot qualification during procurement. Test plans and test reports shall be filed and controlled in accordance with the manufacturer's configuration management system.
- b. The hybrid device manufacturer shall designate a RHA program manager to oversee element lot qualification, and to monitor design changes for continued compliance to RHA requirements.

4.3.5.1.1 Hybrid level radiation qualification.

4.3.5.1.1.1 Total ionizing dose irradiation testing. A minimum of four hybrid devices of this type will be characterized and tested initially and after any design or process changes which may affect the RHA response of the device type. Devices are tested at Condition A, Method 1019 of MIL-STD-883 to 100 krad(Si) in a biased circuit. 0.9000/90% statistics are applied to the device parameters as specified in table IA herein.

4.3.5.1.1.2 Single Event Phenomena (SEP). A minimum of one representative hybrid from this SMD shall be characterized for SEL and SET responses at initial qualification and after any design or process change which may affect the RHA response of the devices on this SMD. Testing shall be performed in accordance with ASTM F1192. Test conditions are as follows:

- a. The ion beam angle of incidence shall be normal to the die surface. No shadowing of the ion beam due to fixturing is allowed.
- b. The fluence shall be $\geq 1 \times 10^6$ particles/cm².
- c. The flux shall be between 10² and 10⁵ ions/cm²/s.
- d. The particle range shall be ≥ 60 micron in silicon.
- e. The characterization is performed at maximum input and BIAS voltages, and with both nominal and maximum output voltages with output load capacitors of 47 μ F and 1 μ F in parallel. The test temperature shall be +25°C, except latch-up which is at +125°C.
- f. For SEP test limits, See table IB herein.

4.3.5.1.2 Element level radiation qualification.

4.3.5.1.2.1 Technologies not tested. Testing is not performed on device technologies including: Diodes which the manufacturer determines to be radiation hardened.

4.3.5.1.2.2 Total Ionizing Dose Irradiation. Ten samples from each wafer lot of active elements, except as noted in 4.3.5.1.2.1, will be characterized and tested at Condition A, method 1019 of MIL-STD-883 to 100 krad(Si). Element parametric degradation test results are analyzed using 0.9900/90% statistics and compared to limits established for the elements at hybrid device design.

4.3.5.1.2.3 Accelerated annealing test. Accelerated annealing tests shall be performed on all CMOS microcircuit die requiring a RHA level greater than 5 krad(Si). The post-anneal end-point electrical parameter limits shall be as specified in table IA herein and shall be the pre-irradiation end-point electrical parameter limit at +25°C \pm 5°C. Testing shall be performed at initial qualification and after any design or process changes which may affect the RHA response of the device.

4.3.5.2 Radiation lot Acceptance. Each wafer lot of active elements, except as noted in 4.3.5.1.2.1, shall be evaluated for acceptance in accordance with MIL-PRF-38534 and herein.

4.3.5.2.1 Total Ionizing Dose Irradiation. TID is performed in accordance with 4.3.5.1.2.2. and 4.3.5.1.2.3.

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5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38534.

6. NOTES

6.1 Intended use. Microcircuits conforming to this drawing are intended for use for Government microcircuit applications (original equipment), design applications, and logistics purposes.

6.2 Replaceability. Microcircuits covered by this drawing will replace the same generic device covered by a contractor-prepared specification or drawing.

6.3 Configuration control of SMD's. All proposed changes to existing SMD's will be coordinated as specified in MIL-PRF-38534.

6.4 Record of users. Military and industrial users shall inform DLA Land and Maritime when a system application requires configuration control and the applicable SMD. DLA Land and Maritime will maintain a record of users and this list will be used for coordination and distribution of changes to the drawings. Users of drawings covering microelectronic devices (FSC 5962) should contact DLA Land and Maritime -VA, telephone (614) 692-8108.

6.5 Comments. Comments on this drawing should be directed to DLA Land and Maritime -VA, Columbus, Ohio 43218-3990, or telephone (614) 692-1081.

6.6 Sources of supply. Sources of supply are listed in MIL-HDBK-103 and QML-38534. The vendors listed in MIL-HDBK-103 and QML-38534 have submitted a certificate of compliance (see 3.7 herein) to DLA Land and Maritime -VA and have agreed to this drawing.

6.7 Additional information. When applicable, a copy of the following additional data shall be maintained and available from the device manufacturer:

- a. RHA upset levels.
- b. Test conditions (SEP).
- c. Occurrence of latchup (SEP).
- d. Occurrence of Single Event Upset (SEP).
- e. Number of transients (SEP).

STANDARD MICROCIRCUIT DRAWING DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990	SIZE A		5962-09237
		REVISION LEVEL A	SHEET 16

STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 13-06-17

Approved sources of supply for SMD 5962-09237 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38534 during the next revisions. MIL-HDBK-103 and QML-38534 will be revised to include the addition or deletion of sources. The vendors listed below have agreed to this drawing and a certificate of compliance has been submitted to and accepted by DLA Land and Maritime -VA. This information bulletin is superseded by the next dated revisions of MIL-HDBK-103 and QML-38534. DLA Land and Maritime maintains an online database of all current sources of supply at <http://www.landandmaritime.dla.mil/Programs/Smcr/>.

Standard microcircuit drawing PIN <u>1/</u>	Vendor CAGE number	Vendor similar PIN <u>2/</u>
5962-0923701KXA	88379	VRG8691-201-2S
5962R0923701KXA	88379	VRG8691-901-2S
5962-0923701KXC	88379	VRG8691-201-1S
5962R0923701KXC	88379	VRG8691-901-1S
5962-0923701KYA	88379	VRG8692-201-2S
5962R0923701KYA	88379	VRG8692-901-2S
5962-0923701KYC	88379	VRG8692-201-1S
5962R0923701KYC	88379	VRG8692-901-1S

- 1/ The lead finish shown for each PIN representing a hermetic package is the most readily available from the manufacturer listed for that part. If the desired lead finish is not listed contact the Vendor to determine its availability.
- 2/ Caution. Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.

Vendor CAGE number

88379

Vendor name and address

Aeroflex Plainview Incorporated,
 (Aeroflex Microelectronic Solutions)
 35 South Service Road
 Plainview, NY 11803-4193

The information contained herein is disseminated for convenience only and the Government assumes no liability whatsoever for any inaccuracies in the information bulletin.