REVISIONS

LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	Add case outlines F and 2. Add output noise voltage test to table I, reference section. Change minimum limit for $V_{TH(SYNC)}$ test in table I, oscillator section. Editorial changes throughout.	94-02-28	M. A. FRYE
B	Add device class V device and make change to TABLE II. - ro	00-11-30	R. MONNIN
C	Add device type 05. Make Changes to 1.2.2, 1.3, 1.4, table I, figure 1, and figure 2. - ro	01-03-21	R. MONNIN

THE ORIGINAL FIRST SHEET OF THIS DRAWING HAS BEEN REPLACED.

REV																				
SHEET																				
REV	C																			
SHEET	15																			

REV STATUS	REV	C	C	C	C	C	C	C	C	C	C	C	C	C	C
OF SHEETS	SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14

PMIC N/A

PREPARED BY
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STANDARD MICROCIRCUIT DRAWING

THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

AMSC N/A

CHECKED BY
D. H. JOHNSON

APPROVED BY
MICHAEL A. FRYE

DRAWING APPROVAL DATE
89-04-27

MICROCIRCUIT, LINEAR, REGULATING, PULSE WIDTH MODULATOR, MONOLITHIC SILICON

REVISION LEVEL	SIZE	CAGE CODE	
C	A	**67268**	**5962-89511**

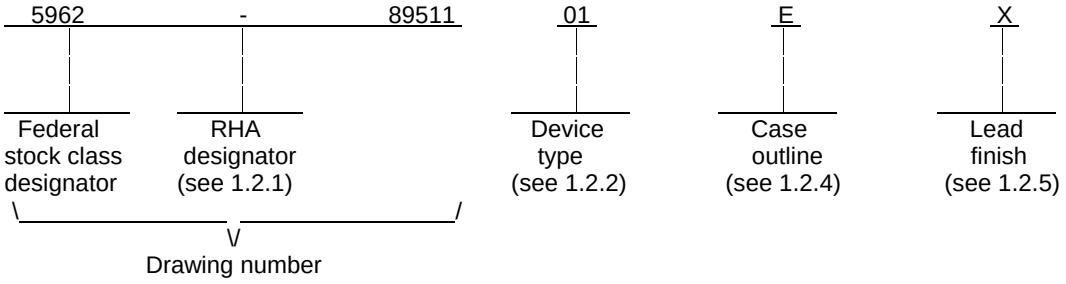
SHEET 1 OF 15

1. SCOPE

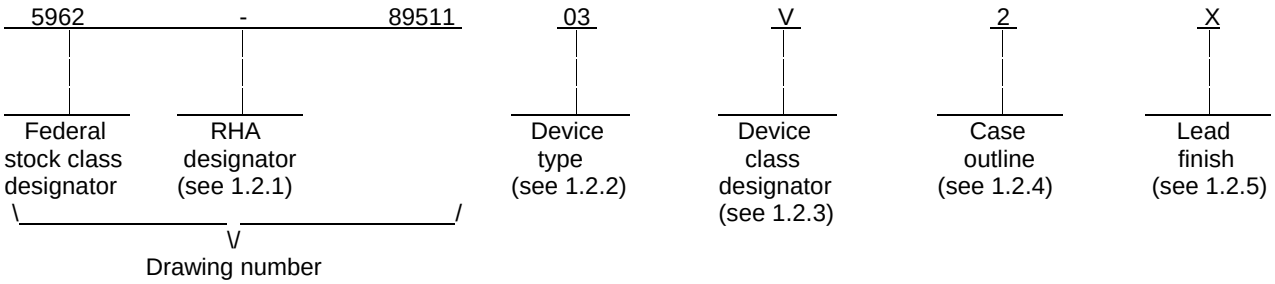
1.1 Scope. This drawing documents two product assurance class levels consisting of high reliability (device classes Q and M) and space application (device class V). A choice of case outlines and lead finishes are available and are reflected in the Part or Identifying Number (PIN). When available, a choice of Radiation Hardness Assurance (RHA) levels are reflected in the PIN.

1.2 PIN. The PIN is as shown in the following examples.

For device classes M and Q:



For device class V:



1.2.1 RHA designator. Device classes Q and V RHA marked devices meet the MIL-PRF-38535 specified RHA levels and are marked with the appropriate RHA designator. Device class M RHA marked devices meet the MIL-PRF-38535, appendix A specified RHA levels and are 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:

Device type	Generic number	Circuit function
01	1525A	Regulating pulse width modulator
02	1527A	Regulating pulse width modulator
03	UC1525A	Regulating pulse width modulator
04	UC1527A	Regulating pulse width modulator
05	UC1525B	Regulating pulse width modulator

1.2.3 Device class designator. The device class designator is a single letter identifying the product assurance level as listed below. Since the device class designator has been added after the original issuance of this drawing, device classes M and Q designators will not be included in the PIN and will not be marked on the device.

Device class	Device requirements documentation
M	Vendor self-certification to the requirements for MIL-STD-883 compliant, non-JAN class level B microcircuits in accordance with MIL-PRF-38535, appendix A
Q or V	Certification and qualification to MIL-PRF-38535

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

Outline letter	Descriptive designator	Terminals	Package style
E	GDIP1-T16 or CDIP2-T16	16	Dual-in-line
F	GDFP2-F16 or CDFP3-F16	16	Flat pack
2	CQCC1-N20	20	Square leadless chip carrier

1.2.5 Lead finish. The lead finish is as specified in MIL-PRF-38535 for device classes Q and V or MIL-PRF-38535, appendix A for device class M.

1.3 Absolute maximum ratings. 1/

Input voltage ($+V_{IN}$) .....+40 V dc
Collector voltage (V_C) .....+40 V dc
Logic inputs range.....-0.3 V dc to +5.5 V dc
Analog inputs range .....-0.3 V dc to $+V_{IN}$
Output current, source or sink.....500 mA
Reference output current .....50 mA
Oscillator charging current .....5 mA
Maximum power dissipation (P_D).....1,000 mW
Lead temperature (soldering, 10 seconds) .....+300°C
Junction temperature (T_J) .....+150°C
Storage temperature range .....-65°C to +150°C
Thermal resistance, junction-to-case (θ_{JC}).....See MIL-STD-1835
Thermal resistance, junction-to-ambient (θ_{JA}):
  Cases E and F.....100°C/W
  Case 2 .....70°C/W

1.4 Recommended operating conditions.

Input voltage ($+V_{IN}$) .....+8 V dc to +35 V dc
Collector voltage (V_C) .....+4.5 V dc to +35 V dc
Sink/source load current (steady-state) .....0 mA to 100 mA
Sink/source load current (peak).....0 mA to 400 mA
Reference load current range .....0 mA to 20 mA
Oscillator frequency range:
  Device types 01 - 04 .....100 Hz to 350 kHz
  Device type 05 .....100 Hz to 400 kHz

1/ Stresses above the absolute maximum rating may cause permanent damage to the device. Extended operation at the maximum levels may degrade performance and affect reliability.

1.4 Recommended operating conditions – continued.

Oscillator timing resistor (R_T):
Device types 01 – 04 .....2 kΩ to 200 kΩ
Device type 05 .....2 kΩ to 150 kΩ
Oscillator timing capacitor range (C_T):
Device types 01 – 04 .....470 pF to 0.1 μF
Device type 05 .....0.001 pF to 0.1 μF
Dead time resistor range (device type 05 only) .....0 Ω to 500 Ω
Ambient operating temperature range (T_A).....-55°C to +125°C

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 listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-38535 - Integrated Circuits, Manufacturing, General Specification for.

STANDARDS

DEPARTMENT OF DEFENSE

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

HANDBOOKS

DEPARTMENT OF DEFENSE

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

(Unless otherwise indicated, copies of the specification, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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 requirements for device classes Q and V shall be in accordance with MIL-PRF-38535 and as specified herein 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. The individual item requirements for device class M shall be in accordance with MIL-PRF-38535, appendix A for non-JAN class level B devices and as specified herein.

3.2 Design, construction, and physical dimensions. The design, construction, and physical dimensions shall be as specified in MIL-PRF-38535 and herein for device classes Q and V or MIL-PRF-38535, appendix A and herein for device class M.

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

3.2.2 Terminal connection(s). The terminal connection(s) shall be as specified on figure 1.

3.2.3 Logic diagram(s). The logic diagram(s) shall be as specified on figure 2.

3.3 Electrical performance characteristics and post irradiation parameter limits. Unless otherwise specified herein, the electrical performance characteristics and post irradiation parameter limits are as specified in table I and shall apply over the full ambient 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 I.

3.5 Marking. The part shall be marked with the PIN listed in 1.2 herein. In addition, the manufacturer's PIN may also be marked as listed in MIL-HDBK-103. For packages where marking of the entire SMD PIN number is not feasible due to space limitations, the manufacturer has the option of not marking the "5962-" on the device. For RHA product using this option, the RHA designator shall still be marked. Marking for device classes Q and V shall be in accordance with MIL-PRF-38535. Marking for device class M shall be in accordance with MIL-PRF-38535, appendix A.

3.5.1 Certification/compliance mark. The certification mark for device classes Q and V shall be a "QML" or "Q" as required in MIL-PRF-38535. The compliance mark for device class M shall be a "C" as required in MIL-PRF-38535, appendix A.

3.6 Certificate of compliance. For device classes Q and V, a certificate of compliance shall be required from a QML-38535 listed manufacturer in order to supply to the requirements of this drawing (see 6.6.1 herein). For device class M, a certificate of compliance shall be required from a manufacturer in order to be listed as an approved source of supply in MIL-HDBK-103 (see 6.6.2 herein). The certificate of compliance submitted to DSCC-VA prior to listing as an approved source of supply for this drawing shall affirm that the manufacturer's product meets, for device classes Q and V, the requirements of MIL-PRF-38535 and herein or for device class M, the requirements of MIL-PRF-38535, appendix A and herein.

3.7 Certificate of conformance. A certificate of conformance as required for device classes Q and V in MIL-PRF-38535 or for device class M in MIL-PRF-38535, appendix A shall be provided with each lot of microcircuits delivered to this drawing.

3.8 Notification of change for device class M. For device class M, notification to DSCC-VA of change of product (see 6.2 herein) involving devices acquired to this drawing is required for any change as defined in MIL-PRF-38535, appendix A.

3.9 Verification and review for device class M. For device class M, DSCC, DSCC's agent, and the acquiring activity retain the option to review the manufacturer's facility and applicable required documentation. Offshore documentation shall be made available onshore at the option of the reviewer.

3.10 Microcircuit group assignment for device class M. Device class M devices covered by this drawing shall be in microcircuit group number 110 (see MIL-PRF-38535, appendix A).

TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions 1/ $-55°C \le T_A \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits 2/		Unit
					Min	Max	
Reference section							
Reference voltage out	V_{REF}		1	01-04	5.05	5.15	V
			2,3		5.0	5.2	
			1	05	5.062	5.138	
Line regulation	V_{RLINE}	V_{IN} = 8 V to 35 V	1,2,3	01-04	-30	30	mV
				05	-10	10	
Load regulation	V_{LOAD}	I_L = 0 mA to 20 mA	1,2,3	01-04	-50	50	mV
				05	-15	15	
Short-circuit current	I_{OS}	V_{REF} = 0 V, t < 25 ms, T_A = +25°C	1	01-04	-100		mA
				05		100	
Temperature stability	V_{TS}	3/	2,3	05		50	mV
Total output variation	V_{TOV}	Line, load, and temperature	1,2,3	05	5.036	5.164	V
Long term stability	V_{LTS}	1000 hours, 3/ T_A = +125°C	2	05		10	mV
Output noise voltage	N_O	10 Hz ≤ f ≤ 10 kHz, 3/ T_A = +25°C	7	All		200	µVrms
Oscillator section							
Initial accuracy	F_{OSC}	T_A = +25°C	4	All	37.5	42.5	kHz
Oscillator accuracy over temperature	F_{OSC} (OT)	T_A = -55°C and +125°C	5,6	All	35.2	44.8	kHz
Voltage stability	V_{STAB}	V_{IN} = 8 V to 35 V	4,5,6	All		±1	%
Clock pulse amplitude	V_{OSC}	3/	4,5,6	All	3		V
Clock pulse width	t_{PW}	T_A = +25°C 3/	9	All	0.3	1.0	µs
Max oscillator frequency	F_{MAX}	R_T = 2 kΩ, C_T = .001 µF	4,5,6	01,02	300		kHz
		R_T = 2 kΩ, C_T = 470 µF		03,04	350		
				05	400		

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ $-55°C \le T_A \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits 2/		Unit
					Min	Max	
Oscillator section – continued.							
Min oscillator frequency	F_{MIN}	R_T = 150 kΩ, C_T = 0.1 µF	4,5,6	01,02		150	Hz
		R_T = 200 kΩ, C_T = 0.1 µF		03,04, 05		120	
Threshold SYNC voltage	V_{TH} (SYNC)		1,2,3	All	1.2	2.8	V
SYNC input current	I_I (SYNC)	SYNC voltage = 3.5 V	1,2,3	All		2.5	mA
Pulse width modulator comparator section							
Min duty cycle	t_{ON}(min) / t_{OSC}	V_{COMP} = 0.6 V	9,10,11	01-04		.001	%
				05		0	
Max duty cycle	t_{ON}(max) / t_{OSC}	V_{COMP} = 3.6 V	9,10,11	All	45		%
Error amplitude section, V_{CM} = 5.1 V (unless otherwise specified)							
Input offset voltage	V_{IO}	$R_S \le 2$ kΩ	1,2,3	All	-5	5	mV
Input bias current	I_{IB}		1,2,3	All		10	µA
Input offset current	I_{IO}		1,2,3	All	-1	1	µA
DC open loop gain	A_{VOL}	T_A = +25°C, V_{CM} = 5.1 V, $R_L \ge 10$ MΩ	4	All	60		dB
Output low level	V_{OL}		1,2,3	All		0.5	V
Output high level	V_{OH}		1,2,3	All	3.8		V
Common mode rejection ratio	CMRR	V_{CM} = 1.5 V to 5.2 V	1,2,3	All	60		dB
Power supply rejection ratio	PSRR	V_{IN} = 8 V to 35 V	4,5,6	All	50		dB
Unity gain bandwidth	GBW	A_V = 0 dB, T_A = +25°C 3/	7	All	1		MHz

See footnotes at end of table.

TABLE I. Electrical performance characteristics – Continued.

Test	Symbol	Conditions 1/ $-55°C \le T_A \le +125°C$ unless otherwise specified	Group A subgroups	Device type	Limits 2/		Unit
					Min	Max	
Soft start section							
Soft start current	I_{SS}	V_{SD} = 0 V, V_{SS} = 0 V	1,2,3	All	25	80	µA
Soft start voltage	V_{SS}	V_{SD} = 2.5 V	1,2,3	All		0.7	V
Shutdown input current	I_{SD}	V_{SD} = 2.5 V	1,2,3	All		1.0	mA
Shutdown threshold voltage	V_{TH}	To outputs, V_{SS} = 5.1 V, T_A = +25°C	4	03,04, 05	0.6		V
Output section (each output), V_C = +20 V (unless otherwise specified)							
Output low level	V_{OL}	I_{SINK} = 20 mA	1,2,3	All		0.4	V
		I_{SINK} = 100 mA				2.2	
Output high level	V_{OH}	I_{SOURCE} = -20 mA	1,2,3	All	18		V
		I_{SOURCE} = -100 mA			17		
Under voltage lockout	V_{UL}	V_{COMP} and V_{SS} = high	1,2,3	All	6	8	V
Shutdown delay	t_{SD}	V_{SD} = 3 V, T_A = +25°C 3/	9	01,02		500	ns
		V_{SD} = 2.5 V, T_A = +25°C 3/		03,04, 05		500	
Rise time	t_r	C_L = 1 nF, T_A = +25°C 3/	9	All		600	ns
Collector fall time	tf	C_L = 1 nF, T_A = +25°C 3/	9	All		300	ns
Collector leakage voltage	V_{CL}	V_C = 35 V	1,2,3	05		200	µA
V_C off current	I_{VC} (off)	V_C = 35 V	1,2,3	01,03		200	µA
Total standby current section							
Supply current	I_S	V_{IN} = 35 V	1,2,3	All		20	mA

1/ Unless otherwise specified, $+V_{IN}$ = 20 V, R_T = 3.6 kΩ, C_T = 0.01 µF, and R_D = 0 Ω.

2/ The algebraic convention, whereby the most negative value is a minimum and the most positive is a maximum, is used in this table. Negative current shall be defined as conventional current flow out of a device terminal.

3/ If not tested, shall be guaranteed to the limits specified in table I herein.

Device types	01,02,03,04, and 05	
Case outlines	E and F	2
Terminal number	Terminal symbol	
1	INVERTING INPUT	NC
2	NONINVERTING INPUT	INVERTING INPUT
3	SYNC	NONINVERTING INPUT
4	OSCILLATOR OUTPUT	SYNC
5	C_T	OSCILLATOR OUTPUT
6	R_T	NC
7	DISCHARGE	C_T
8	SOFT-START	R_T
9	COMPENSATION	DISCHARGE
10	SHUTDOWN	SOFT START
11	OUTPUT A	NC
12	GROUND	COMPENSATION
13	V_C	SHUTDOWN
14	OUTPUT B	OUTPUT A
15	$+V_{IN}$	GROUND
16	V_{REF}	NC
17	---	V_C
18	---	OUTPUT B
19	---	$+V_{IN}$
20	---	V_{REF}

NC = No connection

FIGURE 1. Terminal connections.

Device types 01 and 02

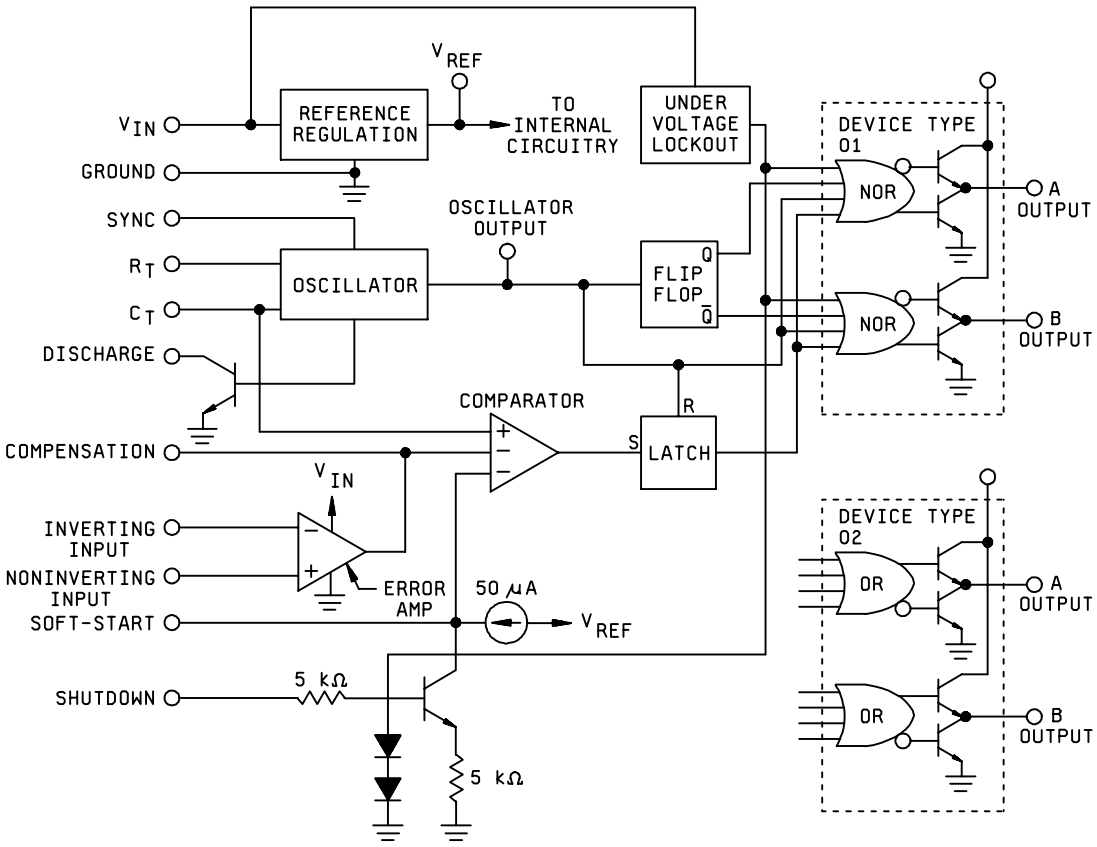


FIGURE 2. Logic diagram .

Device types 03 and 04

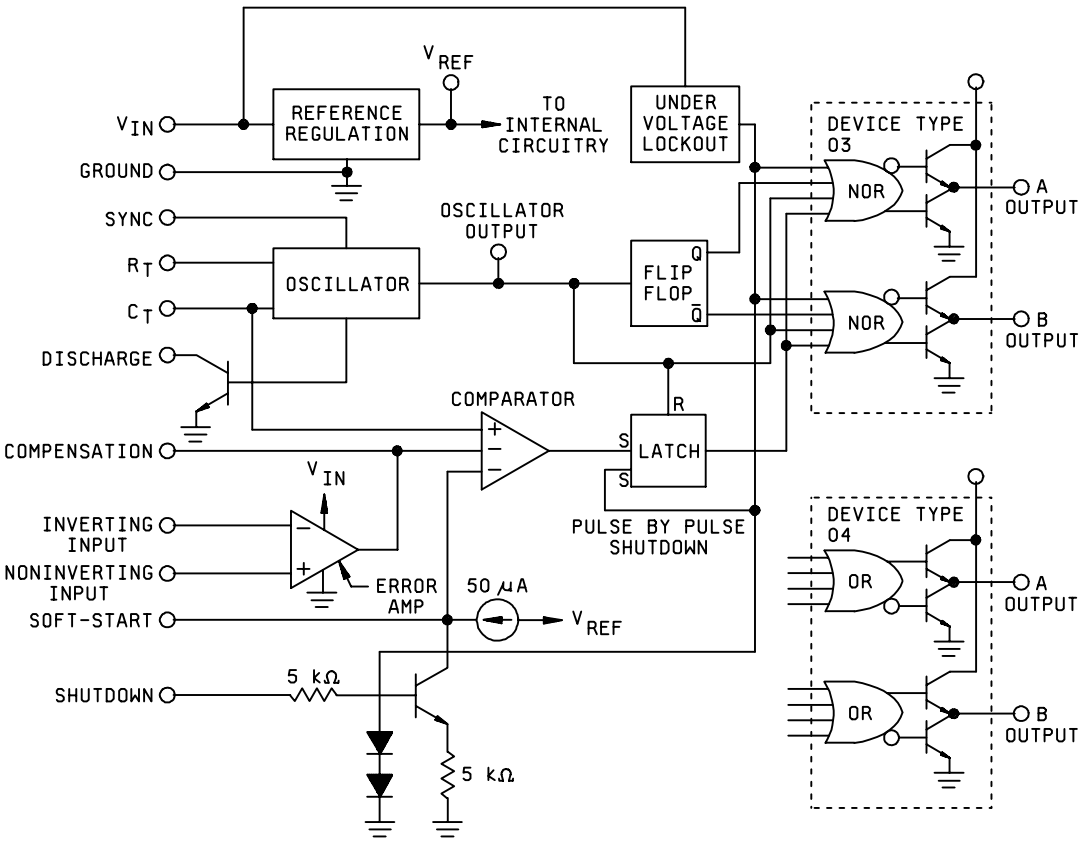


FIGURE 2. Logic diagram – Continued.

Device type 05

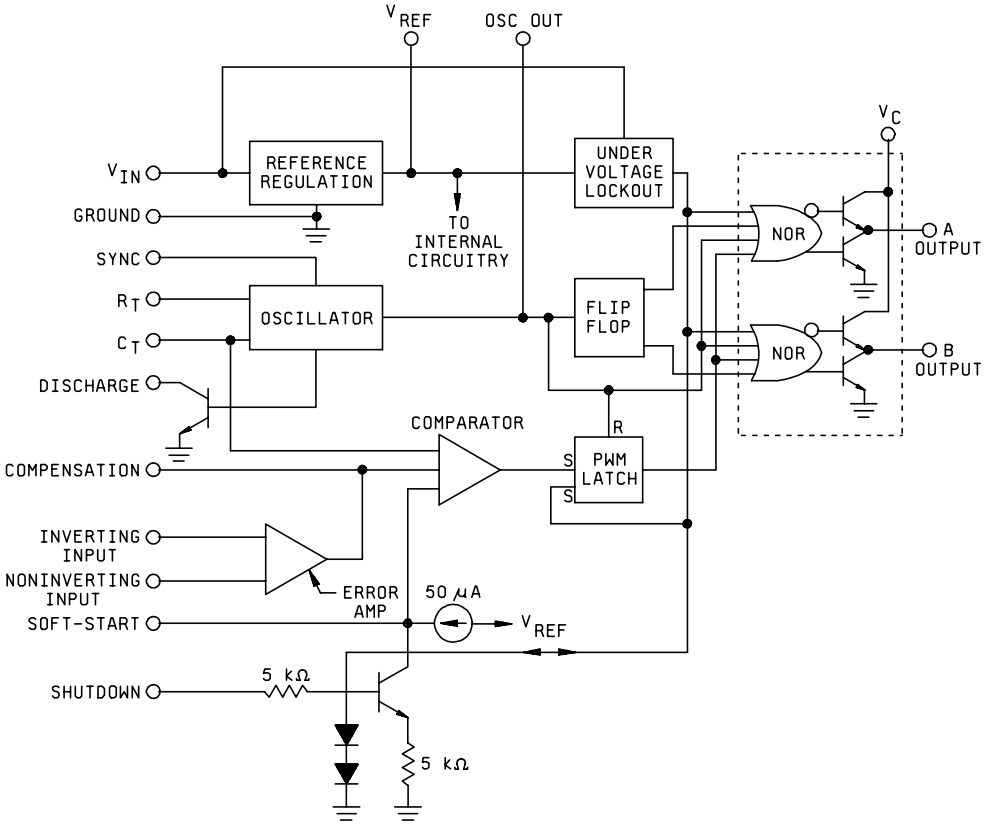


FIGURE 2. Logic diagram – Continued.

4. QUALITY ASSURANCE PROVISIONS

4.1 Sampling and inspection. For device classes Q and V, sampling and inspection procedures shall be in accordance with MIL-PRF-38535 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. For device class M, sampling and inspection procedures shall be in accordance with MIL-PRF-38535, appendix A.

4.2 Screening. For device classes Q and V, screening shall be in accordance with MIL-PRF-38535, and shall be conducted on all devices prior to qualification and technology conformance inspection. For device class M, screening shall be in accordance with method 5004 of MIL-STD-883, and shall be conducted on all devices prior to quality conformance inspection.

4.2.1 Additional criteria for device class M.

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 the preparing or acquiring activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015.

(2) T_A = +125°C, minimum.

b. Interim and final electrical test parameters shall be as specified in table II herein.

4.2.2 Additional criteria for device classes Q and V.

a. The burn-in test duration, test condition and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The burn-in test circuit shall be maintained under document revision level control of the device manufacturer's Technology Review Board (TRB) in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1015 of MIL-STD-883.

b. Interim and final electrical test parameters shall be as specified in table II herein.

c. Additional screening for device class V beyond the requirements of device class Q shall be as specified in MIL-PRF-38535, appendix B.

4.3 Qualification inspection for device classes Q and V. Qualification inspection for device classes Q and V shall be in accordance with MIL-PRF-38535. Inspections to be performed shall be those specified in MIL-PRF-38535 and herein for groups A, B, C, D, and E inspections (see 4.4.1 through 4.4.4).

4.4 Conformance inspection. Technology conformance inspection for classes Q and V shall be in accordance with MIL-PRF-38535 including groups A, B, C, D, and E inspections and as specified herein. Quality conformance inspection for device class M shall be in accordance with MIL-PRF-38535, appendix A and as specified herein. Inspections to be performed for device class M shall be those specified in method 5005 of MIL-STD-883 and herein for groups A, B, C, D, and E inspections (see 4.4.1 through 4.4.4).

4.4.1 Group A inspection.

a. Tests shall be as specified in table II herein.

b. Subgroup 8 in table I, method 5005 of MIL-STD-883 shall be omitted.

TABLE II. Electrical test requirements.

Test requirements	Subgroups (in accordance with MIL-STD-883, method 5005, table I)	Subgroups (in accordance with MIL-PRF-38535, table III)	
	Device class M	Device class Q	Device class V
Interim electrical parameters (see 4.2)	---	---	---
Final electrical parameters (see 4.2)	1,2,3,4,9 1/	1,2,3,4,9 1/	1,2,3,4,9 1/
Group A test requirements (see 4.4)	1,2,3,4,5,6, 7,9,10,11	1,2,3,4,5,6, 7,9,10,11	1,2,3,4,5,6, 7,9,10,11
Group C end-point electrical parameters (see 4.4)	1	1	1,2,3
Group D end-point electrical parameters (see 4.4)	1	1	1,2,3
Group E end-point electrical parameters (see 4.4)	---	---	---

1/ PDA applies to subgroup 1.

4.4.2 Group C inspection. The group C inspection end-point electrical parameters shall be as specified in table II herein.

4.4.2.1 Additional criteria for device class M. Steady-state life test conditions, method 1005 of MIL-STD-883:

a. 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 the preparing or acquiring activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.

b. T_A = +125°C, minimum.

c. Test duration: 1,000 hours, except as permitted by method 1005 of MIL-STD-883.

4.4.2.2 Additional criteria for device classes Q and V. The steady-state life test duration, test condition and test temperature, or approved alternatives shall be as specified in the device manufacturer's QM plan in accordance with MIL-PRF-38535. The test circuit shall be maintained under document revision level control by the device manufacturer's TRB in accordance with MIL-PRF-38535 and shall be made available to the acquiring or preparing activity upon request. The test circuit shall specify the inputs, outputs, biases, and power dissipation, as applicable, in accordance with the intent specified in test method 1005 of MIL-STD-883.

4.4.3 Group D inspection. The group D inspection end-point electrical parameters shall be as specified in table II herein.

4.4.4 Group E inspection. Group E inspection is required only for parts intended to be marked as radiation hardness assured (see 3.5 herein).

a. End-point electrical parameters shall be as specified in table II herein.

b. For device classes Q and V, the devices or test vehicle shall be subjected to radiation hardness assured tests as specified in MIL-PRF-38535 for the RHA level being tested. For device class M, the devices shall be subjected to radiation hardness assured tests as specified in MIL-PRF-38535, appendix A for the RHA level being tested. All device classes must meet the post irradiation end-point electrical parameter limits as defined in table I at T_A = +25°C ±5°C, after exposure, to the subgroups specified in table II herein.

c. When specified in the purchase order or contract, a copy of the RHA delta limits shall be supplied.

5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38535 for device classes Q and V or MIL-PRF-38535, appendix A for device class M.

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.

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

6.2 Configuration control of SMD's. All proposed changes to existing SMD's will be coordinated with the users of record for the individual documents. This coordination will be accomplished using DD Form 1692, Engineering Change Proposal.

6.3 Record of users. Military and industrial users should inform Defense Supply Center Columbus when a system application requires configuration control and which SMD's are applicable to that system. DSCC 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 DSCC-VA, telephone (614) 692-0544.

6.4 Comments. Comments on this drawing should be directed to DSCC-VA, Columbus, Ohio 43216-5000, or telephone (614) 692-0547.

6.5 Abbreviations, symbols, and definitions. The abbreviations, symbols, and definitions used herein are defined in MIL-PRF-38535 and MIL-HDBK-1331.

6.6 Sources of supply.

6.6.1 Sources of supply for device classes Q and V. Sources of supply for device classes Q and V are listed in QML-38535. The vendors listed in QML-38535 have submitted a certificate of compliance (see 3.6 herein) to DSCC-VA and have agreed to this drawing.

6.6.2 Approved sources of supply for device class M. Approved sources of supply for class M are listed in MIL-HDBK-103. The vendors listed in MIL-HDBK-103 have agreed to this drawing and a certificate of compliance (see 3.6 herein) has been submitted to and accepted by DSCC-VA.

STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 01-03-21

Approved sources of supply for SMD 5962-89511 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38535 during the next revision. MIL-HDBK-103 and QML-38535 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 DSCC-VA. This bulletin is superseded by the next dated revision of MIL-HDBK-103 and QML-38535.

Standard microcircuit drawing PIN 1/	Vendor CAGE number	Vendor similar PIN 2/	Reference military specification PIN
5962-8951101EA	U3158	IP1525AJ/883B	M38510/12602BEA
	01295	UC1525AJ/883B	
	34333	SG1525AJ/883B	
	64155 3/	LT1525AJ/883	
5962-8951101FA	34333	SG1525AF/883B	
5962-89511012A	01295	UC1525AL/883B	
5962-8951102EA	U3158	IP1527AJ/883B	M38510/12604BEA
	01295	UC1527AJ/883B	
	34333	SG1527AJ/883B	
	64155 3/	LT1527AJ/883	
5962-89511022A	01295	UC1527AL/883B	
5962-8951103EA	01295	UC1525AJ/883B	
5962-89511032A	01295	UC1525AL/883B	
5962-8951103VEA	01295	UC1525AJQMLV	
5962-8951103V2A	01295	UC1525ALQMLV	

Standard microcircuit drawing PIN 1/	Vendor CAGE number	Vendor similar PIN 2/	Reference military specification PIN
5962-8951104EA	01295	UC1527AJ/883B	
5962-89511042A	01295	UC1527AL/883B	
5962-8951105EA	01295	UC1525BJ/883B	
5962-89511052A	01295	UC1525BL/883B	
5962-8951105VEA	01295	UC1525BJQMLV	
5962-8951105V2A	01295	UC1525BLQMLV	

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.
3/ The end-of-life date for this device is 30 March 2001.

Vendor CAGE number	Vendor name and address
U3158	Semelab PLC Coventry Road, Lutterworth Leicestershire, LE174JB United Kingdom Point of contact: 19 Palham Island Road Wayland, MA 01778
01295	Texas Instruments, Incorporated Semiconductor Group 8505 Forest Lane P.O. Box 660199 Dallas, TX 75243 Point of contact: 6412 Highway 75 South Sherman, TX 75090-9493
34333	Linfinity Microelectronics, Incorporated 11861 Western Avenue Garden Grove, CA 92641
64155	Linear Technology Corporation 720 Sycamore Drive Milpitas, CA 95035-7487