

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
D	Add device type 02.	01-10-24	Raymond Monnin
E	Added a class E device for cage 50434. Updated paragraphs 3.1 and 4.2. Added paragraph 4.3.6 in section 4 for listing the class E exceptions. Added the class E part numbers in the Standard Microcircuit Drawing Bulletin page. -sld	02-05-01	Raymond Monnin
F	Add device type 03.	03-08-22	Raymond Monnin
G	Table I; For the Input-output insulation current test (I <sub>IO</sub> ), under the condition block changed "RH ≤ 45 %" to "RH ≤ 65 %". Editorial changes throughout. -sld	04-09-16	Raymond Monnin
H	Table I; Changed the symbols in the conditions block for the Output withstand voltage, Output on resistance, Output leakage current, Input forward voltage, Turn-on time, and Turn-off time tests. Editorial changes throughout. -sld	04-12-09	Raymond Monnin
J	Added footnote to paragraph 1.2.2. Re-worded paragraph 4.3.6 for clarification of the class E requirements -sld.	05-08-09	Raymond Monnin
K	Updated drawing paragraphs. -sld	12-03-09	Charles F. Saffle
L	Added device type 04. -sld	15-12-01	Charles F. Saffle
M	Figure 1: Corrected dimensions "D" and "S" for case outlines X and Y. Editorial changes throughout. -sld	17-08-03	Charles F. Saffle

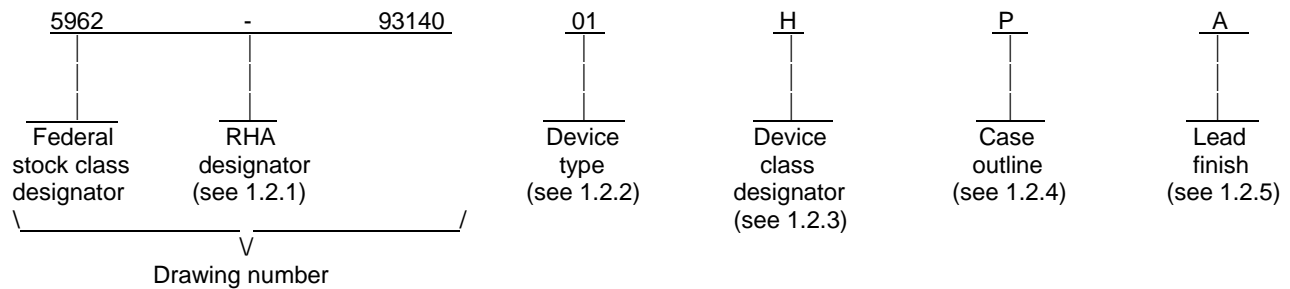


REV	M																		
SHEET	15																		
REV STATUS		REV		M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
OF SHEETS		SHEET		1	2	3	4	5	6	7	8	9	10	11	12	13	14		
PMIC N/A		PREPARED BY Gary Zahn				<b>DLA LAND AND MARITIME</b> <b>COLUMBUS, OHIO 43218-3990</b> <a href="http://www.landandmaritime.dla.mil/">http://www.landandmaritime.dla.mil/</a>													
<b>STANDARD MICROCIRCUIT DRAWING</b>  THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE  AMSC N/A		CHECKED BY Michael C. Jones																	
		APPROVED BY Kendall A. Cottongim																	
		DRAWING APPROVAL DATE 93-07-23																	
		REVISION LEVEL <b>M</b>				SIZE A	CAGE CODE <b>67268</b>	<b>5962-93140</b>											
						SHEET 1 OF 15													

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 is as shown in the following example:



1.2.1 Radiation hardness assurance (RHA) designator. RHA marked devices meet the MIL-PRF-38534 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:

<u>Device type</u> 1/	<u>Generic number</u>	<u>Circuit function</u>
01	HSSR-7111, HSSR-711E, 53111-1	Power switch with optically isolated control
02	HSSR-7112, 53111-2	Power switch with optically isolated control
03	53111-3	Power switch with optically isolated control
04	53115-4	Power switch with optically isolated control

1.2.3 Device class designator. This device class designator is 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.

1/ See paragraph 4.3.6 herein for class E device(s).

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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>
P	CDIP2-T8	8	Dual-in-line
X	See figure 1	8	Dual-in-line
Y	See figure 1	8	Dual-in-line
Z	See figure 1	8	Dual-in-line

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

1.3 Absolute maximum ratings. <sup>1/</sup>

Input current ( $I_{FON}$ ) .....	20 mA	
Peak repetitive input current ( $I_{FPK}$ ) .....	40 mA	<sup>2/</sup>
Peak surge input current ( $I_{FPK}$ surge) .....	100 mA	<sup>3/</sup>
Reverse input voltage ( $V_R$ ) .....	5 V dc	
Output current:		
$I_O$ (AC or DC loads, connection A):		
Device types 01-03 .....	0.8 A	
Device type 04 .....	0.28 A	
$I_O$ (DC load only, connection B):		
Device types 01-03 .....	1.6 A	
Device type 04 .....	0.55 A	
Single shot output current:		
$I_{OPK}$ surge (AC or DC loads, connection A, pulse width <10 ms):		
Device types 01-03 .....	5.0 A	
Device type 04 .....	0.5 A	
$I_{OPK}$ surge (DC load only, connection B, pulse width <10 ms):		
Device types 01-03 .....	10.0 A	
Device type 04 .....	1.0 A	
Output voltage:		
$V_O$ (AC or DC loads, connection A):		
Device types 01-03 .....	-90 V to +90 V	
Device type 04 .....	-480 V to +480 V	
$V_O$ (DC load only, connection B):		
Device types 01-03 .....	0 V to +90 V	
Device type 04 .....	0 V to +480 V	
Output power dissipation ( $P_O$ ) .....	800 mW	<sup>4/</sup>
Junction temperature ( $T_J$ ) .....	+150°C	
Case operating temperature ( $T_C$ ) .....	+145°C	<sup>5/</sup>
Thermal resistance junction-to-case ( $\theta_{JC}$ ) .....	15°C/W	
Lead temperature (soldering, 10 seconds) .....	+260°C	
Storage temperature range .....	-65°C to +150°C	

1.4 Recommended operating conditions.

Input current range ( $I_{FON}$ )	
Device type 01 .....	10 mA to 20 mA
Device types 02, 03, and 04 .....	5 mA to 20 mA
Input voltage range ( $V_{FON}$ ) .....	0 to 0.6 V
Ambient operating temperature range ( $T_A$ ) .....	-55°C to +125°C

<sup>1/</sup> 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.

<sup>2/</sup> Pulse width < 100 ms, duty cycle < 50 %.

<sup>3/</sup> Pulse width < 0.2 ms, duty cycle < 0.1 %.

<sup>4/</sup> Output power dissipation ( $P_O$ ) is obtained when the part is handling the maximum output current ( $I_O$ ).

<sup>5/</sup> Case operating temperature ( $T_C$ ) is measured at the center of package bottom.

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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.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-883 - Test Method Standard Microcircuits.  
MIL-STD-1835 - Interface Standard for 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 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 Truth table(s). The truth table(s) shall be as specified on figure 3.

3.2.4 Switching time test circuit and waveform(s). The switching time test circuit and waveform(s) shall be as specified on figure 4.

3.2.5 Output transient rejection test circuit and waveform(s). The output transient rejection test circuit and waveform(s) shall be as specified on figure 5.

3.2.6 Input-output transient rejection test circuit and waveform(s). The input-output transient rejection test circuit and waveform(s) shall be as specified on figure 6.

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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 I.

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.

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.

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) TA shall be +125°C minimum. Classes H, G, and D shall be 160 hours minimum. Classes K and E shall be 320 hours minimum.
- b. The class E device(s) shall meet the class K screening requirements of MIL-PRF-38534, except as specified herein.
- c. 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.

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TABLE I. Electrical performance characteristics.

Test	Symbol	Conditions -55°C ≤ T <sub>A</sub> ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Output withstand voltage	V <sub>O(OFF)</sub>	V <sub>F</sub> = 0.6 V, I <sub>O</sub> = 10 μA	1,2,3	01-03	90		V
				04	480		
Output on resistance: Connection A	R <sub>ON</sub>	I <sub>F</sub> = 10 mA, I <sub>O</sub> = 800 mA, pulse duration ≤ 30 ms <u>1/</u>	1,2,3	01		1.0	Ω
		I <sub>F</sub> = 5 mA, I <sub>O</sub> = 800 mA, pulse duration ≤ 30 ms <u>1/</u>		02,03		1.0	
		I <sub>F</sub> = 5 mA, I <sub>O</sub> = 100 mA, pulse duration ≤ 30 ms <u>1/</u>		04		8.0	
Output on resistance: Connection B	R <sub>ON</sub>	I <sub>F</sub> = 10 mA, I <sub>O</sub> = 1.6 A, pulse duration ≤ 30 ms <u>1/ 2/</u>	1,2,3	01		0.25	
		I <sub>F</sub> = 5 mA, I <sub>O</sub> = 1.6 A, pulse duration ≤ 30 ms <u>1/ 2/</u>		02,03		0.25	
		I <sub>F</sub> = 5 mA, I <sub>O</sub> = 200 mA, pulse duration ≤ 30 ms <u>1/ 2/</u>		04		2.0	
Output leakage current	I <sub>O(OFF)</sub>	V <sub>F</sub> = 0.6 V, V <sub>O</sub> = 90 V	1,2,3	01-03		10	μA
		V <sub>F</sub> = 0.6 V, V <sub>O</sub> = 480 V		04		25	
Input forward voltage	V <sub>F</sub>	I <sub>F</sub> = 10 mA	1,2,3	01	1.0	1.7	V
		I <sub>F</sub> = 5 mA		02,03, 04	1.0	1.7	
Input reverse breakdown voltage	V <sub>r</sub>	I <sub>r</sub> = 100 μA	1,2,3	All	5.0		V
Input-output insulation current <u>3/ 4/</u>	I <sub>I-O</sub>	V <sub>I-O</sub> = 1500 V dc, t = 5 s, RH ≤ 65 %, T <sub>A</sub> = +25°C	1	01-03		1.0	μA
		V <sub>I-O</sub> = 1200 V dc, t = 5 s, RH ≤ 65 %, T <sub>A</sub> = +25°C		04		1.0	
Turn-on time	t <sub>ON</sub>	I <sub>F</sub> = 10 mA, V <sub>DD</sub> = 28 V dc, I <sub>O</sub> = 800 mA, see figure 4.	9,10,11	01		6.0	ms
		I <sub>F</sub> = 5 mA, V <sub>DD</sub> = 28 V dc, I <sub>O</sub> = 800 mA, see figure 4.		02,03		6.0	
		I <sub>F</sub> = 5 mA, V <sub>DD</sub> = 350 V dc, I <sub>O</sub> = 200 mA, see figure 4.		04		6.0	

See footnotes on next page.

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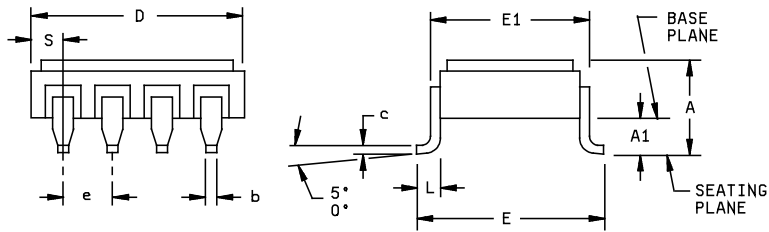
TABLE I. Electrical performance characteristics - Continued.

Test	Symbol	Conditions -55°C ≤ T <sub>A</sub> ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Turn-off time	t <sub>OFF</sub>	I <sub>F</sub> = 10 mA, V <sub>DD</sub> = 28 V dc, I <sub>O</sub> = 800 mA, see figure 4.	9,10,11	01		0.25	ms
		I <sub>F</sub> = 5 mA, V <sub>DD</sub> = 28 V dc, I <sub>O</sub> = 800 mA, see figure 4.		02,03		0.25	
		I <sub>F</sub> = 5 mA, V <sub>DD</sub> = 350 V dc, I <sub>O</sub> = 200 mA, see figure 4.		04		0.25	
Output transient rejection	dV <sub>O</sub> /dt	V <sub>O(PEAK)</sub> = 50 V, C <sub>M</sub> = 1000 pF, R <sub>M</sub> ≥ 1 MΩ, C <sub>L</sub> = 15 pF, T <sub>A</sub> = +25°C, see figure 5.	9	All	1000		V/μs
Input-output transient rejection	dV <sub>I-O</sub> /dt	V <sub>DD</sub> = 5 V dc, C <sub>L</sub> = 15 pF, V <sub>I-O(PEAK)</sub> = 50 V, R <sub>L</sub> = 20 kΩ, T <sub>A</sub> = +25°C, see figure 6.	9	All	500		V/μs

- 1/ During the pulse R<sub>ON</sub> measurement (I<sub>O</sub> duration < 30 ms), T<sub>A</sub> and T<sub>C</sub> are equal.
- 2/ Connection B is not actually tested but guaranteed by connection A during the output on resistance test.
- 3/ Device considered a two terminal device, pins 1 through 4 are shorted together and pins 5 through 8 are shorted together.
- 4/ This is a momentary withstand test, not an operating condition.

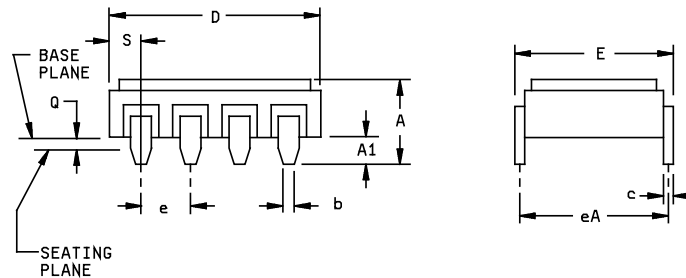
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Case outline X.



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A		4.57		.180
A1	1.40	1.65	.055	.065
b	0.41	0.51	.016	.020
c	0.18	0.33	.007	.013
D	9.66	10.29	.380	.405
e	2.29	2.79	.090	.110
E	9.65	9.91	.380	.390
E1		8.13		.320
L	1.07	1.32	.042	.052
S	1.02	1.52	.040	.060

Case outline Y.



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A		4.32		.170
A1	1.14	1.40	.045	.055
b	0.41	0.51	.016	.020
c	0.18	0.33	.007	.013
D	9.66	10.29	.380	.405
e	2.29	2.79	.090	.110
E		8.13		.320
eA	7.37	7.87	.290	.310
Q	0.51		.020	
S	1.02	1.52	.040	.060

NOTES:

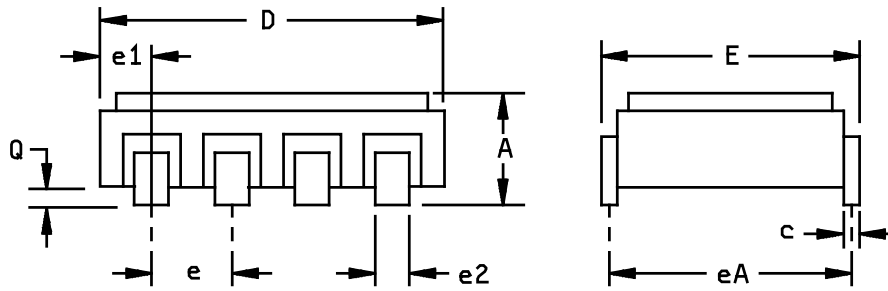
1. The U.S. government preferred system of measurement is the metric SI. This item was designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.
2. Pin 1 is indicated by the ESD triangle(s) marked on top of the package.

FIGURE 1. Case outlines.

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Case outline Z.



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A		3.56		.140
c	0.18	0.33	.007	.013
D	9.40	9.91	.370	.390
e	2.29	2.79	.090	.110
eA	7.37	7.87	.290	.310
e1	0.89	1.27	.035	.050
e2	0.89	1.14	.035	.045
E		8.13		.320
Q	0.51		.020	

NOTES:

1. The U.S. government 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. Pin 1 is indicated by the ESD triangle(s) marked on top of the package.

FIGURE 1. Case outlines - Continued.

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Device types	All	
Case outlines	P, X, Y, and Z	
Terminal number	Terminal symbol	
	Connection A (AC or DC load)	Connection B (DC load only)
1	No connection	No connection
2	$V_{F+}$	$V_{F+}$
3	$V_{F-}$	$V_{F-}$
4	No connection	No connection
5	$V_{O-}$	$V_{O+}$
6	No connection	No connection
7	No connection	$V_{O-}$
8	$V_{O+}$	$V_{O+}$

NC = No connection.

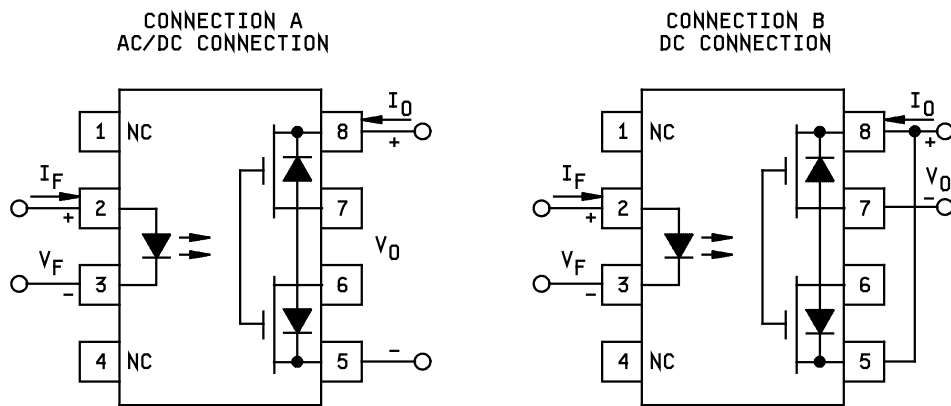


FIGURE 2. Terminal connections.

Input	Output
OFF	OFF
ON	ON

FIGURE 3. Truth table(s).

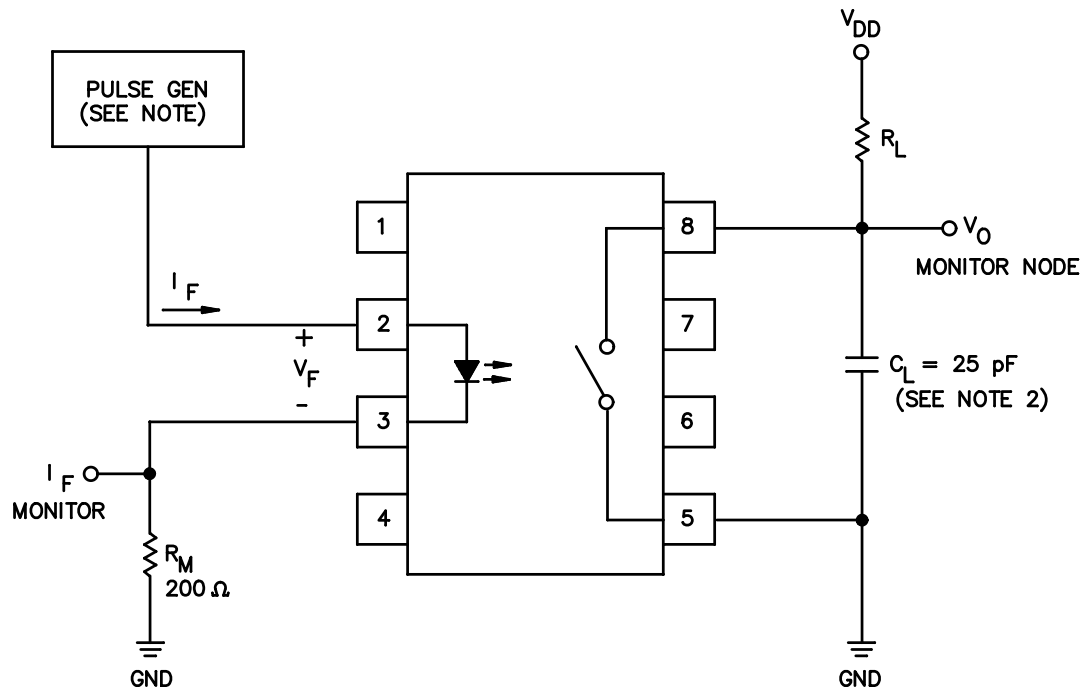
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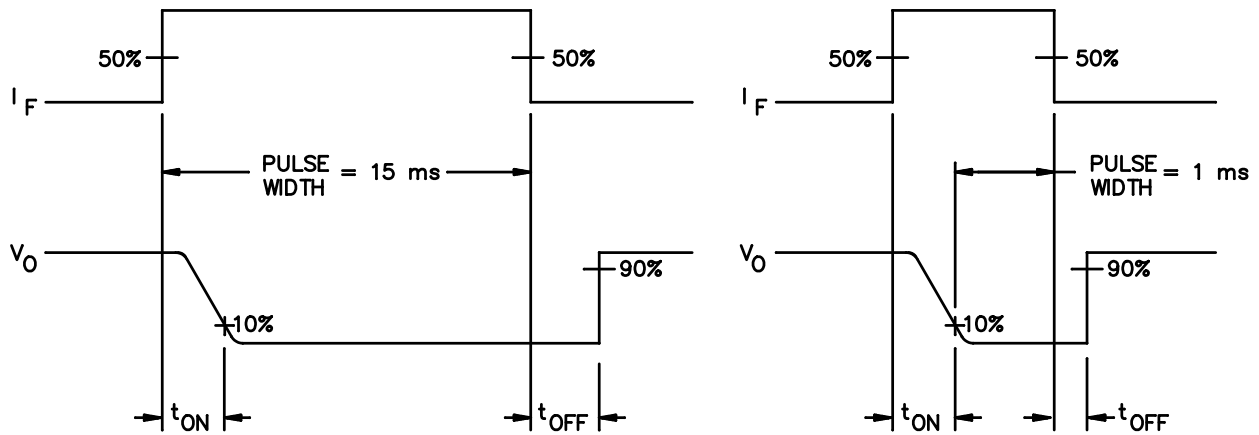
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DEVICE TYPES 01,02 AND 04

DEVICE TYPE 03



NOTES:

1. Pulse generator having the following characteristics: output impedance =  $50 \Omega$  and  $t_{ON} = t_{OFF} = 5.0 \text{ ns}$ .
2. Load capacitance ( $C_L$ ) includes probe and jig capacitance.

FIGURE 4. Switching test circuit and waveform(s).

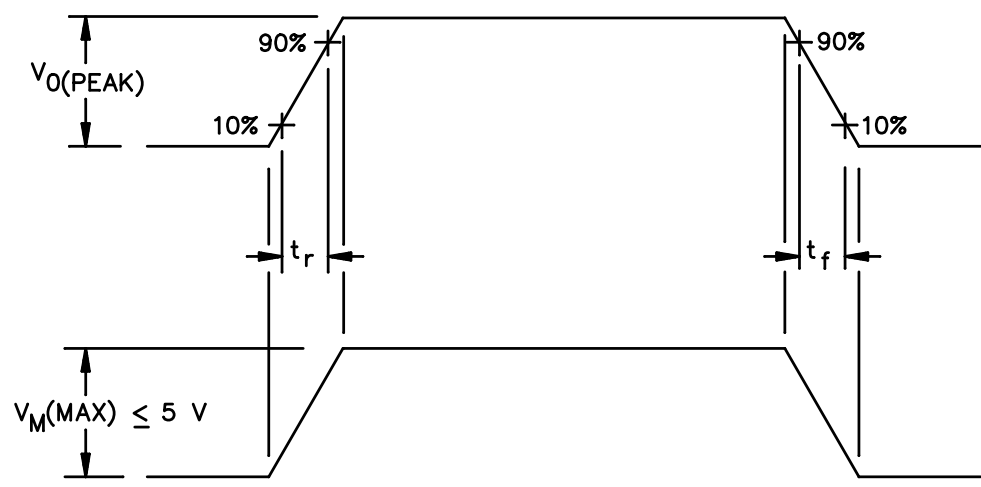
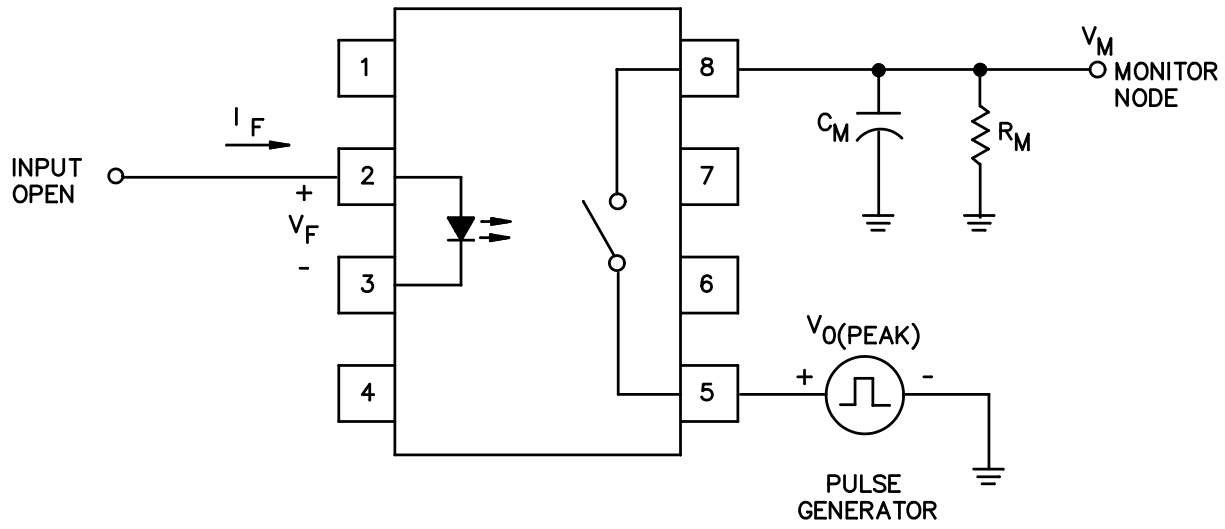
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**11**



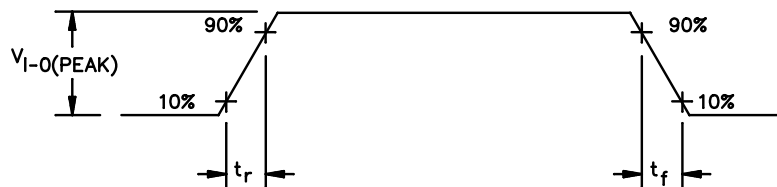
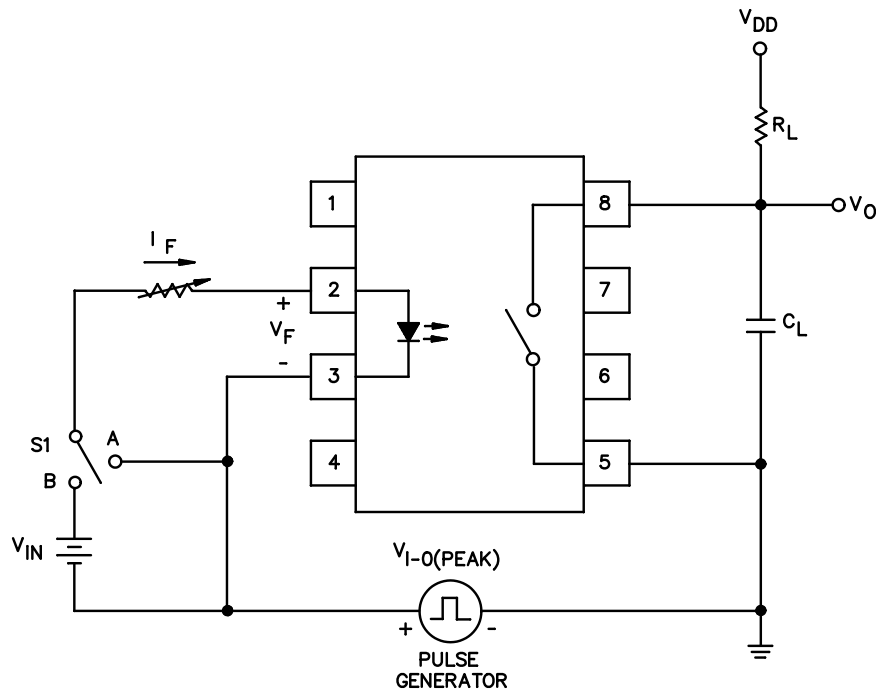
$$\frac{dV_O}{dt} = \frac{(0.8) V_O (\text{PEAK})}{t_r} \quad \text{OR} \quad \frac{(0.8) V_O (\text{PEAK})}{t_f}$$

Overshoot on  $V_O (\text{PEAK})$  is to be  $\leq 10\%$

- NOTES:
1.  $C_M$  includes probe and fixture capacitance.
  2.  $R_M$  includes probe and fixture resistance.

FIGURE 5. Output transient rejection test circuit and waveform(s).

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$V_{O(OFF)}$   
 $S_1$  AT A ( $V_F = 0$  V)  $V_{O(OFF)} (MIN) \geq 3.25$  V

$V_{O(ON)}$   $-V_{O(ON)} (MAX) \leq 0.8$  V

$S_1$  AT B ( $I_F = 10$  mA) for device type 01

$S_1$  AT B ( $I_F = 5$  mA) for device types 02,03, and 04

$$\frac{dV_{I-0}}{dt} = \frac{(0.8) V_{I-0(PEAK)}}{t_r} \text{ OR } \frac{(0.8) V_{I-0(PEAK)}}{t_f}$$

Overshoot on  $V_{I-0(PEAK)}$  is to be  $\leq 10\%$

NOTE: Load capacitance ( $C_L$ ) includes probe and fixture capacitance.

FIGURE 6. Input-output transient rejection test circuit and waveform(s).

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SHEET  
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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, 9
Group A test requirements	1, 2, 3, 9, 10, 11
Group C end-point electrical parameters	1, 2, 3
End-point electrical parameters for radiation hardness assurance (RHA) devices	Not applicable

\* PDA applies to subgroup 1.

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, and 8 shall be omitted.

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

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<sub>A</sub> 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) inspection. RHA inspection is not currently applicable to this drawing.

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4.3.6 Class E exceptions. The device(s) are based on class K requirements of MIL-PRF-38534 with the following exceptions:

- a. Nondestructive Bond Pull, Test method 2023 of MIL-STD-883 in device screening is not required.
- b. Particle Impact Noise Detection (PIND), Test method 2020 of MIL-STD-883 in device screening and group C testing is not required.
- c. Die Shear Strength, Test method 2019 of MIL-STD-883 in group B testing is not required.
- d. Internal Water Vapor Content, Test method 1018 of MIL-STD-883 in group C testing is not required.
- e. Scanning Electron Microscope (SEM) inspections, Test method 2018 of MIL-STD-883 in element evaluation is not required.

**"The user(s) of the class E device should review the exception(s) to insure the system performance will not be adversely affected."**

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 should inform DLA Land and Maritime when a system application requires configuration control and the applicable SMD to that system. 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.

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STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 17-08-03

Approved sources of supply for SMD 5962-93140 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 <https://landandmaritimeapps.dla.mil/programs/smcr/>.

Standard microcircuit drawing PIN <u>1</u> /	Vendor CAGE number	Vendor similar PIN <u>2</u> /
5962-9314001EPA	31757	53111-1EPA
5962-9314001EPA	50434	HSSR-711E-200
5962-9314001EPC	31757	53111-1EPC
5962-9314001EPC	50434	HSSR-711E
5962-9314001HPA	31757	53111-1HPA
5962-9314001HPA	50434	HSSR-7111#200
5962-9314001HPC	31757	53111-1HPC
5962-9314001HPC	50434	HSSR-7111
5962-9314001EXA	31757	53111-1EXA
5962-9314001EXA	50434	ASSR-711E-300
5962-9314001EXC	31757	53111-1EXC
5962-9314001HXA	31757	53111-1HXA
5962-9314001HXA	50434	HSSR-7111#300
5962-9314001HXC	31757	53111-1HXC
5962-9314001HYA	31757	53111-1HYA
5962-9314001HYA	50434	HSSR-7111#100
5962-9314001HYC	31757	53111-1HYC
5962-9314001HYC	50434	HSSR-7111#100
5962-9314001HZA	31757	53111-1HZA
5962-9314001HZA	50434	HSSR-7111#600
5962-9314001HZC	31757	53111-1HZC
5962-9314001HZC	50434	HSSR-7111#600
5962-9314002EPA	31757	53111-2EPA
5962-9314002EPA	50434	ASSR-7112E-200
5962-9314002EPC	31757	53111-2EPC
5962-9314002EPC	50434	ASSR-7112E
5962-9314002HPA	31757	53111-2HPA
5962-9314002HPA	50434	HSSR-7112-200
5962-9314002HPC	31757	53111-2HPC
5962-9314002HPC	50434	HSSR-7112
5962-9314002EXA	31757	53111-2EXA
5962-9314002EXA	50434	ASSR-7112E-300
5962-9314002EXC	31757	53111-2EXC
5962-9314002HXA	31757	53111-2HXA
5962-9314002HXA	50434	HSSR-7112-300
5962-9314002HXC	31757	53111-2HXC
5962-9314002HYA	31757	53111-2HYA
5962-9314002HYA	50434	HSSR-7112-100
5962-9314002HYC	31757	53111-2HYC
5962-9314002HYC	50434	HSSR-7112-100
5962-9314002HZA	31757	53111-2HZA
5962-9314002HZA	50434	ASSR-7112-600
5962-9314002HZC	31757	53111-2HZC
5962-9314002HZC	50434	ASSR-7112-600
5962-9314003HPA	31757	53111-3HPA
5962-9314003HPC	31757	53111-3HPC
5962-9314003HXA	31757	53111-3HXA
5962-9314003HXC	31757	53111-3HXC



STANDARD MICROCIRCUIT DRAWING BULLETIN - CONTINUED.

DATE: 17-08-03

Standard microcircuit drawing PIN <u>1/</u>	Vendor CAGE number	Vendor similar PIN <u>2/</u>
5962-9314004HPA	31757	53115-4HPA
5962-9314004HPC	31757	53115-4HPC
5962-9314004HXA	31757	53115-4HXA
5962-9314004HXC	31757	53115-4HXC
5962-9314004HYA	31757	53115-4HYA
5962-9314004HYC	31757	53115-4HYC

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

Vendor name  
and address

31757

Micropac Industries Incorporated  
905 East Walnut Street  
Garland, TX 75040

50434

Avago Technologies  
1320 Ridder Park Drive  
San Jose, CA 95131

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