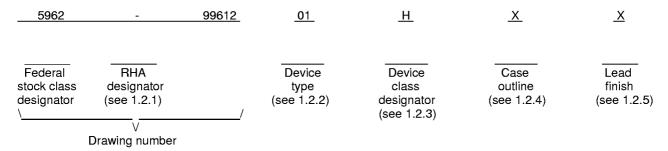
STANDARD MICROCIRCUIT DRAWING APPROVED BY Ray Monnin AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE Gary Zahn DEFENSE SUPPLY CENTER COLUMBUS POST OFFICE BOX 3990 COLUMBUS, OHIO 43216-5000 MICROCIRCUIT, LINEAR, ADJUSTABLE VOLTAGE REGULATOR, MONOLITHIC SILICON									F	REVISI	ONS										
SHEET	LTR		DESCRIPTION								DATE (YR-MO-DA)			APPROVED							
SHEET																					
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SHEET																					
REV																					
SHEET 1 2 3 4 5 6 7 8 9 10 11 12 13		<u></u>		L	BE/	 ./		1		-						-		_	-	-	
PMIC N/A PREPARED BY Gary Zahn CHECKED BY Michael C. Jones CHECKED BY Michael C. Jones APPROVED BY Ray Monnin APPROVED BY Ray Monnin MICROCIRCUIT, LINEAR, ADJUSTABLE VOLTAGE REGULATOR, MONOLITHIC SILICON DRAWING APPROVAL DATE 99-08-26 REVISION LEVEL SIZE CAGE CODE A 67268 5962-99612		•						1	2	3	4	5	6	7	8	9	10	11	12	13	
MICROCIRCUIT DRAWING THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A Michael C. Jones COLUMBUS, OHIO 43216-5000 MICROCIRCUIT, LINEAR, ADJUSTABLE VOLTAGE REGULATOR, MONOLITHIC SILICON DRAWING APPROVAL DATE 99-08-26 REVISION LEVEL SIZE CAGE CODE A 67268 SHEFT	PMIC N/A	up -			PRE Ga	PARI	hn				- T			SE SI	JPPL	Y CE	NTEF	COL	_ UMB		
THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A REVISION LEVEL Ray Monnin MICROCIRCUIT, LINEAR, ADJUSTABLE VOLTAGE REGULATOR, MONOLITHIC SILICON SIZE CAGE CODE A 67268 5962-99612 SHEFT	MICRO	CIRC	CUIT		Mic	:UKEI :hael (C. Jon	ies													
AND AGENCIES OF THE DEPARTMENT OF DEFENSE AMSC N/A REVISION LEVEL SIZE CAGE CODE A 67268 SHEFT	AVAILABLE FOR USE BY ALL							,			VOLTAGE REGULATOR, MONOLITHIC										
A 67268 5962-99612 SHEET					DRA	WING			L DAT	ΓE											
SHEET	AMS	SC N/A	4		REV	'ISION	N LEV	EL									59	962-	996	12	
											SHEET										

DSCC FORM 2233 APR 97

- 1. SCOPE
- 1.1 <u>Scope</u>. This drawing documents five product assurance classes, class D (lowest reliability), class E, (exceptions), class G (lowered high reliability), class H (high reliability), and class K, (highest reliability) and 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 <u>Radiation hardness assurance (RHA) designator</u>. 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:

Device type	Generic number 1/	Circuit function
01	SDP117	Positive adjustable voltage regulator
02	SDP117HV	Positive adjustable voltage regulator, high voltage
03	SDP137	Negative adjustable voltage regulator
04	SDP137HV	Negative adjustable voltage regulator, high voltage

1.2.3 <u>Device class designator</u>. This device class designator shall be a single letter identifying the product assurance level as follows:

<u>Device class</u> <u>Device performance documentation</u>

D, E, G, H, or K Certification and qualification to MIL-PRF-38534

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

Outline letter	Descriptive designator	<u>Terminals</u>	Package style
N	See figure 1	3	Z-tab with non-isolated tab, (TO-257Z) with glass seal
Т	See figure 1	3	Flange mount with non-isolated tab, (TO-257), with glass seal
U	See figure 1	3	Flange mount with isolated tab, (TO-257), with glass seal
Z	See figure 1	3	Z-tab with isolated tab, (TO-257Z), with glass seal

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

1/ The SDP117, SDP117HV, SDP137, and SDP137HV are similar to the LM117, LM117HV, LM137, and LM137HV listed on Standard Microcircuit Drawing 77034.

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1.3 Absolute maximum ratings. 1/

. 40 V dc
. 60 V dc
. 50 V dc
55 C to +150 C
65 C to +150 C
. 300 C
. 20 W
. 3.5 C/W
. 4.2 C/W

Maximum output current (I_{MAX})...... 1.5 A

1.4 Recommended operating conditions.

Output voltage range:

Device type ()1	. 1.2 to 37 V dc
Device type (02	. 1.2 to 57 V dc
Device type ()3	1.2 to -37 V dc
Device type (04	1.2 to -47 V dc
Input voltage ra	inge:	
Device type ()1 [¯]	. 4.25 V dc to 41.25 V dc
Device type ()3	4.25 V dc to -41.25 V dc
Device type ()2	. 4.25 V dc to 61.25 V dc
Device type (04	4.25 V dc to -51.25 V dc
	ing temperature range (T _A)	

2. APPLICABLE DOCUMENTS

2.1 <u>Government specification, standards, and handbooks</u>. 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-38534 - Hybrid Microcircuits, General Specification for.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-883 - Test Method Standard Microcircuits.

MIL-STD-973 - Configuration Management.

MIL-STD-1835 - Interface Standard For Microcircuit Case Outlines.

^{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.

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HANDBOOKS

DEPARTMENT OF DEFENSE

MIL-HDBK-103 - List of Standard Microcircuit Drawings (SMD's).

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 <u>Order of precedence</u>. 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 <u>Item requirements</u>. 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 may 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. Therefore, the tests and inspections herein may not be performed for the applicable device class (see MIL-PRF-38534). Furthermore, the manufacturer may take exceptions or use alternate methods to the tests and inspections herein and not perform them. However, the performance requirements as defined in MIL-PRF-38534 shall be met for the applicable device class.
- 3.2 <u>Design, construction, and physical dimensions</u>. 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.
- 3.3 <u>Electrical performance characteristics</u>. 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 <u>Electrical test requirements</u>. 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 <u>Marking of device(s)</u>. 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 as listed in MIL-HDBK-103 and QML-38534.
- 3.6 <u>Data</u>. 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 (DSCC-VA) upon request.
- 3.7 <u>Certificate of compliance</u>. 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 DSCC-VA shall affirm that the manufacturer's product meets the performance requirements of MIL-PRF-38534 and herein.
- 3.8 <u>Certificate of conformance</u>. A certificate of conformance as required in MIL-PRF-38534 shall be provided with each lot of microcircuits delivered to this drawing.

4. QUALITY ASSURANCE PROVISIONS

4.1 <u>Sampling and inspection</u>. 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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	T	ABLE I. Electrical performance	characteristic	<u>s</u> .			
Test	Symbol	Conditions -55 C T_A +125 C Group A subgroups		Device type	Li	Unit	
Device types 01 and 02.		unless otherwise specified			Min	Max	
Reference voltage	V _{REF}	V _{DIFF} = 3.0 V	1	01,02	1.20	1.30	V
v		V _{DIFF} = 3.3 V	2,3	1	1.20	1.30	
		V _{DIFF} = 40 V	1,2,3	1	1.20	1.30	1
		V _{DIFF} = 60 V	1,2,3	02	1.20	1.30	
Line regulation 1/	RLINE	V _{OUT} = V _{REF} ,	1	01,02		9	mV
		3.0 V V _{DIFF} 40 V					
		V _{OUT} = V _{REF} ,	2,3			23	
		3.3 V V _{DIFF} 40 V					
		V _{OUT} = V _{REF} ,	1	02		5	
		40 V V _{DIFF} 60 V	2,3			10	
Load regulation 2/	RLOAD	V _{DIFF} = 3 V,	1	01,02		15	mV
		10 mA l∟ 1.5 A					
		$V_{\text{DIFF}} = 3.3 \text{ V},$	2,3			15	
		10 mA l∟ 1.5 A					
		$V_{\text{DIFF}} = 40V$,	1			15	
		10 mA I∟ 300 mA					
		$V_{\text{DIFF}} = 40 \text{ V},$	2,3			15	
		10 mA l∟ 195 mA					
		$V_{DIFF} = 60 V,$	1,2,3	02		15	
		10 mA I∟ 30 mA					
Thermal regulation	V _{RTH}	$V_{IN} = 14.6 \text{ V}, I_{L} = 1.5 \text{ A},$	1	01,02		16	mV
		$P_D = 20 \text{ watts, t} = 20 \text{ ms,}$ $T_A = +25 \text{ C}$					
Ripple rejection 3/	R _N	f = 120 Hz, C _{ADJ} = 10 F,	4,5,6	01	66		dB
Tuppio Tojootion <u>o</u>		V _{OUT} = V _{REF}	1,0,0	"			
		f = 120 Hz, C _{ADJ} = 10 F,		02	66		
		$V_{OUT} = V_{REF}$, $I_{OUT} = 100 \text{ mA}$					
Adjustment pin current	I _{ADJ}	V _{DIFF} = 3.0 V	1	01,02		100	Α
,		V _{DIFF} = 3.3 V	2,3	<u> </u>		100	1
		V _{DIFF} = 40 V	1,2,3	1		100	
		V _{DIFF} = 60 V	1,2,3	02		100	1
See footnotes at end of table.	1	<u> </u>		·			<u> </u>

See	loothotes	аı	ena	OI	table.

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Test	Symbol	Conditions -55 C T_A +125 C $I_L = 8$ mA	Group A subgroups	Device type	Lin	nits	Unit
		unless otherwise specified			Min	Max	
Device types 01 and 02 - Co	ontinued.						
Adjustment pin current change	l _{ADJ}	V _{DIFF} = 3 V, 10 mA I _L 1.5 A	1	01,02		5	A
		V _{DIFF} = 3.3 V, 10 mA l _L 1.5 A	2,3			5	
		V _{DIFF} = 40 V, 10 mA I _L 300 mA	1			5	
		V _{DIFF} = 40 V, 10 mA I _L 195 mA	2,3			5	
		3 V V _{DIFF} 40 V	1			5	-
		3.3 V V _{DIFF} 40 V	2,3	-		5	1
		3.3 V V _{DIFF} 60 V	1,2,3	02		5	1
Minimum load current	I _{LMIN}	V _{DIFF} = 3.0 V, V _{OUT} = 1.4 V (forced)	1	01,02		5	mA
		$V_{\text{DIFF}} = 3.3 \text{ V},$ $V_{\text{OUT}} = 1.4 \text{ V (forced)}$	2,3			5	
		V _{DIFF} = 40 V, V _{OUT} = 1.4 V (forced)	1,2,3			5	
		$V_{\text{DIFF}} = 60 \text{ V},$ $V_{\text{OUT}} = 1.4 \text{ V (forced)}$	1,2,3	02		7	
Current limit 3/	IcL	V _{DIFF} = 15 V	1,2,3	01	1.50	3.50	A
_		V _{DIFF} = 40 V	1		0.18	1.5	1
		V _{DIFF} = 5 V	1,2,3	02	0.5	1.65	1
		V _{DIFF} = 40 V	1	1	0.15	0.65	1
		V _{DIFF} = 60 V	1		0.02	0.28	
Device type 03.							
Reference voltage	V _{REF}	V _{DIFF} = 3.0 V	1	03	-1.275	-1.225	V
			2,3		-1.30	-1.20	
		V _{DIFF} = 40 V	1]	-1.275	-1.225	
			2,3		-1.30	-1.20	
Line regulation	R _{LINE}	3.0 V V _{DIFF} 40 V	1 2,3	03		9	mV

STANDARD MICROCIRCUIT DRAWING	SIZE A		5962-99612
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		Conditions					
Test	Symbol	-55 C T _A +125 C I _L = 8 mA	Group A subgroups	Device type	Lin	nits	Unit
		unless otherwise specified			Min	Max	
Device type 03 - Continue							
Load regulation 2/	RLOAD	$V_{DIFF} = 5 V$,	1,2,3	03		25	mV
		8 mA l∟ 1.5 A					
		$V_{\text{DIFF}} = 12 \text{ V},$	1			25	
		8 mA l∟ 1.5 A					
		V _{DIFF} = 40V,	1			25	
		8 mA l∟ 200 mA					
		V _{DIFF} = 40 V,	2,3			25	
		8 mA l∟ 100 mA					
Thermal regulation	V _{RTH}	V _{IN} = -14.6 V,	1	03		5	mV
		I _L = 1.5 A,					
		$P_D = 20$ watts, $t = 10$ ms,					
		T _A = +25 C					
Ripple rejection 3/	R _N	$f = 120 \text{ Hz}, C_{ADJ} = 10 \text{ F},$	4,5,6	03	66		dB
		Vout = V _{REF}					
Adjustment pin current	I _{ADJ}	V _{DIFF} = 3.0 V	1,2,3	03		100	Α
		V _{DIFF} = 40 V	1,2,3			100	
Adjustment pin current	I _{ADJ}	3.0 V V _{DIFF} 40 V	1,2,3	03		5	Α
change	(line)						
	I _{ADJ}	$V_{\text{DIFF}} = 5.0 \text{ V},$	1,2,3	1		5	1
	(load)	8 mA l∟ 1.5 A					
Minimum load current	I _{LMIN}	V _{DIFF} = 3.0 V,	1,2,3	03		3	mA
		V _{OUT} = -1.4 V (forced)					
		V _{DIFF} = 10 V,	1,2,3			3	
		$V_{OUT} = -1.4 \text{ V (forced)}$					
		V _{DIFF} = 40 V,	1,2,3			5	
		V _{OUT} = -1.4 V (forced)					
Current limit 3/	I _{CL}	V _{DIFF} = 5 V	1,2,3	03	1.5	3.5	Α
		V _{DIFF} = 40 V	1		0.24	1.2	
Device type 04.	•						
Reference voltage	V _{REF}	V _{DIFF} = 3.0 V	1	04	-1.275	-1.225	٧
-			2,3	1	-1.300	-1.200	
		V _{DIFF} = 50 V	1		-1.275	-1.225	
			2,3	1	-1.300	-1.200	
Line regulation	RLINE	3.0 V V _{DIFF} 50 V	1	04		10	mV
Ü			2,3	1		25	1

STANDARD MICROCIRCUIT DRAWING	SIZE A		5962-99612
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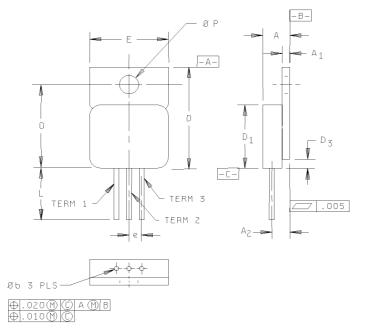
Test Syn		$\begin{array}{c c} & \text{Conditions} \\ -55 \text{ C} & T_A & +125 \text{ C} \\ I_L = 8 \text{ mA} & \text{st} \end{array}$		Device type	Limits		Unit
		unless otherwise specified			Min	Max	
Device type 04 - Continue							_
Load regulation 2/	R _{LOAD}	$V_{\text{DIFF}} = 50 \text{ V},$	1	04		25	mV
		8 mA I∟ 110 mA					
		$V_{\text{DIFF}} = 5.0 \text{ V},$	1] [25	1
		8 mA l∟ 1.5 A	2,3	1 [45	1
Thermal regulation	V _{RTH}	V _{IN} = -14.6 V,	1	04		5	mV
		I _L = 1.5 A,					
		$P_D = 20$ watts, $t = 10$ ms, $T_A = +25$ C					
Ripple rejection 3/	R _N	f = 120 Hz, C _{ADJ} = 10 F,	4,5,6	04	66		dB
		Vout = V _{REF}	-,-,-				
Adjustment pin current	I _{ADJ-1}	V _{DIFF} = 3.0 V	1,2,3	04		100	Α
	I _{ADJ-2}	V _{DIFF} = 40 V	1,2,3	1 1		100	
	I _{ADJ-3}	V _{DIFF} = 50 V	1,2,3	1 1		100	
Adjustment pin current	I _{ADJ}	V _{DIFF} = 5.0 V,	1,2,3	04		5	Α
change		8 mA I _{OUT} 1.5 A					
		I _L = 8 mA,	1,2,3	1 [6	1
		3.0 V V _{DIFF} 50 V					
Minimum load current	I _{LMIN}	V _{DIFF} = 3.0 V,	1,2,3	04		3	mA
		$V_{OUT} = -1.4 \text{ V (forced)}$					
		V _{DIFF} = 10 V,	1,2,3	1 [3	1
		$V_{OUT} = -1.4 \text{ V (forced)}$					
		V _{DIFF} = 40 V,	1,2,3	1 [5	1
		$V_{OUT} = -1.4 \text{ V (forced)}$					
		V _{DIFF} = 50 V,	1,2,3] [5	
		$V_{OUT} = -1.4 \text{ V (forced)}$					
Current limit 3/	I _{CL}	V _{DIFF} = 5 V	1,2,3	04	1.5	3.5	Α

^{1/} To determine the line regulation limits for 3.0 V \leq V_{DIFF} \leq 60 V (or 3.3 V V_{DIFF} 60 V) add the limits for 3.0 V \leq V_{DIFF} \leq 40 V (or 3.3 V V_{DIFF} \leq 40 V) to the limits for 40 V \leq V_{DIFF} \leq 60 V.

- 2/ Regulation is measured at a constant junction temperature, using pulse testing with a low duty cycle. Changes in output voltage due to heating effects are covered under the specification for thermal regulation. With exception of cases U and Z, all output measurements are referenced to the case. Measurements taken at the output lead must be adjusted for lead resistance.
- 3/ If not tested, shall be guaranteed to the specified limits.

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Case outlines T and U.



<u>Inches</u>	<u>mm</u>
0.005	0.13
0.010	0.25
0.020	0.51

Symbol	Millim	eters	Inc	hes
	Min	Max	Min	Max
Α	4.83	5.08	0.190	0.200
A1	0.89	1.14	0.035	0.045
A2	3.05	BSC	0.120	BSC
øb	0.64	0.89	0.025	0.035
D	16.38	16.89	0.645	0.665
D1	10.41	10.92	0.410	0.430
D3	0.00	1.65	0.000	0.065
е	2.54	BSC	0.100	BSC
E	10.41	10.72	0.410	0.422
L	12.70	19.05	0.500	0.750
0	13.39	13.64	0.527	0.537
øΡ	3.56	3.81	0.140	0.150

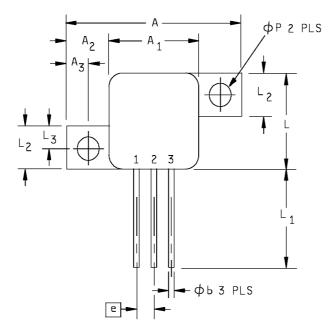
NOTE:

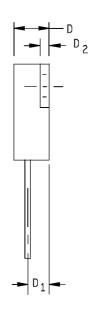
The U.S. government preferred system of measurement is the metric SI system. However, this item was originally designed using inch-pound units of measurement. In the event of conflict between the metric and inch-pound units, the inch-pound units shall take precedence.

FIGURE 1. Case outline(s).

STANDARD MICROCIRCUIT DRAWING	SIZE A		5962-99612
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Case outlines N and Z.





Symbol	Millim	eters	Inc	hes	
	Min	Max	Min	Max	
Α	23.11	23.37	0.910	0.920	
A 1	10.41	10.67	0.410	0.420	
A2	6.22	6.48	0.245	0.255	
А3	3.05	3.30	0.120	0.130	
øb	0.71	0.81	0.028	0.032	
D	4.70	5.59	0.135	0.220	
D1	2.92	3.18	0.115	0.125	
D2	0.89	1.14	0.035	0.045	
е	2.54 BSC		0.100	BSC	
L	10.41	10.67	0.410	0.420	
L1	12.70	19.05	0.500	0.750	
L2	6.22	6.48	0.245	0.255	
L3	3.05	3.30	0.120	0.130	
øΡ	3.05	3 30	0.120	0.130	

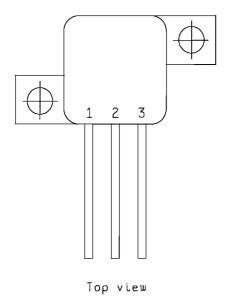
NOTE:

The U.S. government preferred system of measurement is the metric SI system. However, this item was originally designed using inch-pound units of measurement. In the event of conflict between the metric and inch-pound units, the inch-pound units shall take precedence.

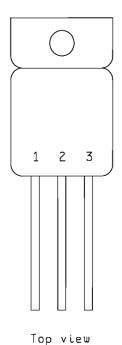
FIGURE 1. Case outline(s) - Continued.

STANDARD MICROCIRCUIT DRAWING	SIZE A		5962-99612
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000		REVISION LEVEL	SHEET 10

Case outlines N and Z



Case outlines T and U



Device type 01,02 03, 04 01, 02 03, 04 Case outlines U and Z U and Z N and T N and T (non-isolated tab) (non-isolated tab) (isolated tab) (isolated tab) Terminal number Terminal symbol Terminal symbol Terminal symbol Terminal symbol **ADJUST ADJUST ADJUST ADJUST** 2 No connection No connection Output Input 3 Input Output Input Output Tab Output Input No connection No connection

FIGURE 2. Terminal connections.

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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	
Final electrical parameters	1*,2,3,4**,5**,6**
Group A test requirements	1,2,3
Group C end-point electrical parameters	1
End-point electrical parameters for radiation hardness assurance (RHA) devices	Not applicable

- * PDA applies to subgroup 1.
- ** Subgroups 4, 5, and 6, if not tested shall be guaranteed to the limits specified in table I.
- 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 DSCC-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 test method 1015 of MIL-STD-883.
 - (2) TA 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 <u>Conformance and periodic inspections</u>. 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 7, 8, 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 DSCC-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 test method 1005 of MIL-STD-883.
 - (2) T_A 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 currently not applicable to this drawing.
- 5. PACKAGING
- 5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38534.
- 6. NOTES
- 6.1 <u>Intended use</u>. 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 <u>Configuration control of SMD's</u>. All proposed changes to existing SMD's will be coordinated with the users of record for the individual documents. This coordination will be accomplished in accordance with MIL-STD-973 using DD Form 1692, Engineering Change Proposal.
- 6.4 <u>Record of users</u>. Military and industrial users shall inform Defense Supply Center Columbus when a system application requires configuration control and the applicable SMD. 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.
- 6.5 <u>Comments</u>. Comments on this drawing should be directed to DSCC-VA, P. O. Box 3990, Columbus, Ohio 43216-5000, or telephone (614) 692-0512.
- 6.6 <u>Sources of supply</u>. 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 DSCC-VA and have agreed to this drawing.

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STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 99-08-26

Approved sources of supply for SMD 5962-99612 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38534 during the next revision. 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 DSCC-VA. This bulletin is superseded by the next dated revision of MIL-HDBK-103 and QML-38534.

Standard microcircuit drawing PIN <u>1</u> / <u>2</u> /	Vendor CAGE number	Vendor similar PIN <u>3</u> /
5962-9961201HNA	21845	SDP117NHD
5962-9961201HNC	21845	SDP117NHG
5962-9961201HTA	21845	SDP117THD
5962-9961201HTC	21845	SDP117THG
5962-9961201HUA	21845	SDP117UHD
5962-9961201HUC	21845	SDP117UHG
5962-9961201HZA	21845	SDP117ZHD
5962-9961201HZC	21845	SDP117ZHG
5962-9961202HNA	21845	SDP117HVNHD
5962-9961202HNC	21845	SDP117HVNHG
5962-9961202HTA	21845	SDP117HVTHD
5962-9961202HTC	21845	SDP117HVTHG
5962-9961202HUA	21845	SDP117HVUHD
5962-9961202HUC	21845	SDP117HVUHG
5962-9961202HZA	21845	SDP117HVZHD
5962-9961202HZC	21845	SDP117HVZHG
5962-9961203HNA	21845	SDP137NHD
5962-9961203HNC	21845	SDP137NHG
5962-9961203HTA	21845	SDP137THD
5962-9961203HTC	21845	SDP137THG
5962-9961203HUA	21845	SDP137UHD
5962-9961203HUC	21845	SDP137UHG
5962-9961203HZA	21845	SDP137ZHD
5962-9961203HZC	21845	SDP137ZHG
5962-9961204HNA	21845	SDP137HVNHD
5962-9961204HNC	21845	SDP137HVNHG
5962-9961204HTA	21845	SDP137HVTHD
5962-9961204HTC	21845	SDP137HVTHG
5962-9961204HUA	21845	SDP137HVUHD
5962-9961204HUC	21845	SDP137HVUHG
5962-9961204HZA	21845	SDP137HVZHD
5962-9961204HZC	21845	SDP137HVZHG

- 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.
- The SMD device types listed above are similar to the device types listed on SMD 77034. 5962-9961201HTA through 04HTA are similar to 7703401TA through 04TA. 5962-9961201HUA through 04HUA are similar to 7703401UA through 04UA.
- <u>Gaution</u>. Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.

Vendor CAGEVendor name_numberand address

21845 Solitron Devices, Incorporated 3990 Electronics Way

West Palm Beach, FL 33407-4697

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