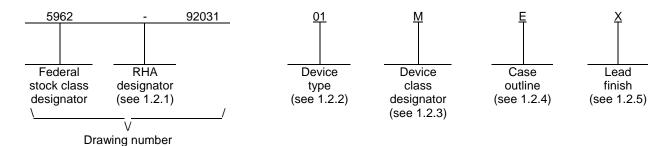
							F	REVISION	SNC										
L暨询"	<u>'5962-92031</u>	03 <b>Q</b> 2A	\"供ʃ	立商	ESCRI	IPTION	١					DA	ATE (Y	R-MO-[	DA)		APPI	ROVED	)
A		Add device type 02. Make changes to 1.2.2, Table I, and fig				and figu	ıre 1.			94-01-06			M. A. FRYE						
В			03. Add case outline 2. Changes to Icc, V					1 0AD2. III	R.		01-02-				R. MON				
	V <sub>OL</sub> , V <sub>OH</sub> , A <sub>V</sub>	OL, C <sub>MRR</sub> ,	and V	<sub>SATL</sub> in	table I.	Upda	te boile	erplate.	-rrp	LOND2; III									
REV																			
SHEET																			
SHEET																			
SHEET REV SHEET	5		REV			В	В	В	В	В	В	В	В	В	В	В			
SHEET REV SHEET REV STATUS	S		REV			B 1	B 2	B 3	B 4	B 5	B 6	B 7	B 8	B 9	B 10	B 11			
REV SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A	5		SHEE PREP	ARED	BY	1				5	6	7	8	9	10	11			
SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A STA	ANDARD OCIRCUIT		SHEE PREP RIC	ARED CK C. (	OFFICE	1 ER	2			5	6 FEN	7 SE SI COL	8 JPPL UMBI	9 Y CE JS, O		11 R COL 43216		BUS	
SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A STA MICRO DR THIS DRAW FOR U	ANDARD		SHEE PREP RIC CHEC CH	CKED E	OFFICE BY S E. BE	1 ER ESORE	2		MIC PO	DE CROC	6 EFEN	FE SI COLI	JPPL UMBI D://ww	y CE JS, O w.ds	NTER	11 R COL 43216 a.mil	T-MC	DDE.	HIC
SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A  STA MICRO DR  THIS DRAW FOR U DEPA	ANDARD OCIRCUIT RAWING  VING IS AVAILAE USE BY ALL	BLE	SHEE PREP RIC CHEC CH	ARED CK C. ( CKED E IARLE ROVEE	OFFICE BY S E. BE	1 ER ESORE	2		MIC PO	DE CROC	6 EFEN	FE SI COLI	JPPL UMBI D://ww	y CE JS, O w.ds	NTER	11 R COL 43216 a.mil	T-MC	DDE.	HIC
SHEET REV SHEET REV STATUS OF SHEETS PMIC N/A  STA MICRO DR  THIS DRAW FOR U DEPA	ANDARD OCIRCUIT RAWING VING IS AVAILABE USE BY ALL ARTMENTS ENCIES OF THE	BLE E SE	SHEE PREPRIC CHEC CH	CKED EIARLE ROVEE	OFFICE  BY S E. BE  D BY EL A. FF	1 ER ESORE RYE	2		MIC PO' SIL	DE CROC	6 EFEN: CIRCU SUP	FE SI COLI	JPPL UMBU :://ww LINE/	y CE JS, O w.ds	NTER HIO cc.dl	11 R COL 43216 a.mil	T-MO	ODE OLITH	HIC

## 1. SCOPE

查询"5962-9203103Q2A"供应商 1.1 <u>Scope</u>. 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

1.2 PIN. The PIN is as shown in the following example:



- 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 <u>Device type(s)</u>. The device type(s) identify the circuit function as follows:

Device type	Generic number	<u>Circuit function</u>			
01	UC1864	Resonant-mode power supply controller			
02	UC1865	Resonant-mode power supply controller			
03	UC1863	Resonant-mode power supply controller			

1.2.3 Device class designator. The device class designator is a single letter identifying the product assurance level as follows:

Device class	Device requirements documentation
М	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

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	<u>Terminals</u>	Package style
Е	GDIP1-T16 or CDIP2-T16	16	Dual-in-line
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.

STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		5962-92031
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000		REVISION LEVEL B	SHEET 2

Q or V

1.3 Absolute maximum ratings. 1/ 2/

查询"5962-9203103Q2A"供应商 Supply voltage (Vcc) 22 V dc

Output current (OUTPUT A and OUTPUT B): Source and sink ...... 0.5 A 

Power ground voltage ±0.2 V Inputs (+INPUT, -INPUT, ZERO, FAULT) ...... -0.4 V to 7 V

Junction temperature (T<sub>J</sub>) ......+150°C

Lead temperature (soldering, 10 seconds) ......+300°C

Storage temperature range ......-65°C to +150°C 

Thermal resistance, junction-to-ambient ( $\theta_{JA}$ ):

Case E 85°C/W 

## 1.4 Recommended operating conditions.

Supply voltage (V<sub>CC</sub>) ...... 12 V dc Ambient operating temperature (T<sub>A</sub>) ......-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.

- 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.
- All voltages are with respect to signal ground and all currents are positive into the specified terminal.
- Derate at 12.5 mW at  $T_A > 70$ °C.

STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		5962-92031
DEFENSE SUPPLY CENTER COLUMBUS		REVISION LEVEL	SHEET

#### 3. REQUIREMENTS

查询"5962-9203103Q2A"供应商 3.1 <u>Item requirements</u>. 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 connections. The terminal connections shall be as specified on figure 1.
- 3.3 Electrical performance characteristics and postirradiation parameter limits. Unless otherwise specified herein, the electrical performance characteristics and postirradiation 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 58 (see MIL-PRF-38535, appendix A).

STANDARD
MICROCIRCUIT DRAWING

DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000

SIZE <b>A</b>		5962-92031
	REVISION LEVEL B	SHEET 4

# 查询"5962-9203103Q2A"供应商ABLE I. Electrical performance characteristics.

Test	Symbol		Group A subgroups	Device type	Lim	nits <u>2</u> /	Uni
				31.	Min	Max	
I <sub>CC</sub> start	Icc	$V_{CC} = V_{CC(ON)} - 0.3 \text{ V}$	1,2,3	All		300	μΑ
I <sub>CC</sub> run	Icc	V <sub>ID</sub> = 100 mV	1,2,3	All		32	mA
5 V Generator section							
Output voltage	V <sub>OUT</sub>	$12~V \le V_{CC} \le 20~V,$ $-10~mA \le I_{OUT} \le 0~mA$	1,2,3	All	4.8	5.2	V
Short circuit current	I <sub>OS</sub>	V <sub>OUT</sub> = 0 V	1,2,3	All	-150	-15	mA
Soft reference section					<u> </u>		
Reference voltage	$V_{REF}$	$I_{OUT} = 0 \text{ mA}, T_A = +25^{\circ}\text{C}$	1	All	4.95	5.05	V
		12 V ≤ $V_{CC}$ ≤ 20 V, -200 μA ≤ $I_{OUT}$ ≤ 200 μA	1,2,3		4.85	5.15	
Line regulation	V <sub>RLINE2</sub>	V <sub>CC</sub> = 12 V and 20 V	1,2,3	All	-20	20	mV
Load regulation	V <sub>RLOAD2</sub>	I <sub>OUT</sub> = ±200 μA	1,2,3	All	-30	30	mV
Soft start current	I <sub>SS</sub>	V = 2 V	1,2,3	All	-650	-350	μА
Restart delay current	I <sub>RD</sub>	V = 2 V	1,2,3	All	10	35	μА
Error amplifier section (V <sub>ID</sub> = '	I V+input — V-i	I INPUT)					
Input offset voltage	V <sub>IO</sub>	V <sub>CM</sub> = 5 V, V <sub>OUT</sub> = 2 V, I <sub>OUT</sub> = 0 mA	1,2,3	All	-10	10	mV
Input bias current	I <sub>IB</sub>	V <sub>CM</sub> = 0 V	1,2,3	All	-2		μΑ
Output voltage, low	VoL	$V_{ID} = -100 \text{ mV},$ $I_{OUT} = 200 \mu\text{A}$	1,2,3	All		0.25	V
Output voltage, high	V <sub>OH</sub>	V <sub>ID</sub> = 100 mV, I <sub>OUT</sub> = -200 μA	1,2,3	All	3.9		V
Voltage gain	A <sub>VOL</sub>	$V_{CM} = 5 \text{ V}, I_{OUT} = 0 \text{ mA},$ $V_{OUT} = 0.5 \text{ V} \text{ and } 3.7 \text{ V}$	1,2,3	All	70		dB
Power supply rejection ratio	PSRR	V <sub>CM</sub> = 5 V, V <sub>OUT</sub> = 2 V, V <sub>CC</sub> = 12 V and 20 V	1,2,3	All	70		dB

See footnotes at end of table.

STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		5962-92031
DEFENSE SUPPLY CENTER COLUMBUS		REVISION LEVEL	SHEET
COLUMBUS, OHIO 43216-5000		B	5

查询"5962-9203103 <b>Q</b> 2A		l. Electrical performance chara	acteristics – Co	ntinued.			
Test	Symbol		Group A subgroups	Device type	Lim	nits <u>2</u> /	Unit
					Min	Max	
Error amplifier section – Cont	,	<u> </u>			•		
Common mode rejection ratio	CMRR	V <sub>OUT</sub> = 2 V, V <sub>CM</sub> = 0 V and 6 V	4,5,6	All	65		dB
Unity gain bandwidth	UGBW	3/	4,5,6	All	0.5		MHz
Voltage controlled oscillator (	VCO) section	on	•	•	•	•	<u> </u>
Maximum frequency	f <sub>MAX</sub>	V <sub>ID</sub> (error amp) = 100 mV	4	All	450	550	kHz
			5,6		425	575	1
Minimum frequency	f <sub>MIN</sub>	V <sub>ID</sub> (error amp) = -100 mV	4	All	45	55	kHz
			5,6		42	58	
One shot section				Į		1	
Zero comparator threshold	V <sub>THZ</sub>		1,2,3	All	0.45	0.55	V
Maximum pulse width, OUTPUT A	t <sub>MAX</sub>	V <sub>ZERO</sub> = 1 V	9,10,11	All	850	1150	ns
Ratio of maximum to	t <sub>MIN</sub> /t <sub>MAX</sub>	V <sub>ZERO</sub> = 0 V	9,10,11	01, 03	2.5	5.5	%
minimum pulse width			9,11	02	4	7	
			10		3.8	7	
Propagation delay	t <sub>PD</sub>	<u>3</u> /	9,10,11	All		200	ns
Output stage section	•		•	•	•	•	<u> </u>
Output low saturation	V <sub>SATL</sub>	I <sub>OUT</sub> = 20 mA	1,2,3	All		0.5	V
(outputs A and B)		I <sub>OUT</sub> = 200 mA				2.2	
Output high saturation (outputs A and B)	V <sub>SATH</sub>	I <sub>OUT</sub> = -200 mA, down from V <sub>CC</sub>	1,2,3	All		2.5	V
Under-voltage lockout (UVLO), low saturation (outputs A and B)	V <sub>SL</sub> A,B	I <sub>OUT</sub> = 20 mA	1,2,3	All		1.5	V
Rise and fall time	t <sub>R</sub> , t <sub>F</sub>	C <sub>L</sub> = 1 nF <u>3</u> /	9,10,11	All		45	ns

See footnotes at end of table.

STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		5962-92031
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000		REVISION LEVEL B	SHEET 6

TABLE I. <u>Electrical performance characteristics</u> – Continued. 查询"5962-9203103Q2A"供应商							
Test	Symbol		Group A subgroups	Device type	Lim	its <u>2</u> /	Unit
					Min	Max	
Fault comparator section							
Fault comparator threshold voltage	V <sub>THF</sub>		1,2,3	All	2.85	3.15	V
Delay to output	t <sub>DO</sub>	<u>3</u> / <u>4</u> /	1,2,3	All		200	ns
Under-voltage lockout (UVLO) section							
V <sub>CC</sub> start threshold	V <sub>STT</sub>		1,2,3	01, 03	7	9	V
				02	15	18	1
V <sub>CC</sub> stop threshold	V <sub>SPT</sub>		1,2,3	01, 03	6	8	V
				02	9.5	11.5	

- 1/ Unless otherwise specified,  $V_{CC}$  = 12 V, voltage controlled oscillator capacitance  $C_{VCO}$  = 1 nF, range resistance = 7.15 kΩ,  $R_{MIN}$  resistance = 86.6 kΩ, capacitance = 200 pF, resistance = 4.02 kΩ, and soft ref capacitance = 0.1 μF.
- 2/ The algebraic convention, whereby the most negative value is a minimum and the most positive value 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 under table I herein.
- $4/V_{IN} = 0 \text{ V to 4 V}, t_{R}(V_{IN}) \le 10 \text{ ns, and } t_{PD} = t(V_{OUT} = 6 \text{ V}) t(V_{IN} = 3 \text{ V}).$

## 4. QUALITY ASSURANCE PROVISIONS

- 4.1 <u>Sampling and inspection</u>. 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 <u>Screening</u>. 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)  $T_A = +125^{\circ}C$ , minimum.
    - b. Interim and final electrical test parameters shall be as specified in table II herein.

STANDARD MICROCIRCUIT DRAWING DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000	SIZE <b>A</b>		5962-92031
		REVISION LEVEL B	SHEET 7

# 查询"5962-9203103Q2A"供应商

Device types	01, 02 and 03	01 and 03
Case outlines	Е	2
Terminal number	Terminal	symbol
1	5 V	SOFT REF
2	+INPUT	5 V
3	-INPUT	+INPUT
4	E/A OUT	-INPUT
5	SIG GND	E/A OUT
6	RANGE	SIG GND
7	R <sub>MIN</sub>	RANGE
8	C <sub>VCO</sub>	R <sub>MIN</sub>
9	RC	$C_{VCO}$
10	ZERO	RC
11	OUTPUT A	ZERO
12	PWR GND	NC
13	Vcc	NC
14	OUTPUT B	OUTPUT A
15	FAULT	PWR GND
16	SOFT REF	PWR GND
17		$V_{CC}$
18		OUTPUT B
19		NC
20		FAULT

NC = No connect

FIGURE 1. <u>Terminal connections</u>.

STANDARD  MICROCIRCUIT DRAWING  DEFENSE SUPPLY CENTER COLUMBUS  COLUMBUS, OHIO 43216-5000	SIZE <b>A</b>		5962-92031
		REVISION LEVEL B	SHEET 8

## 查询"5962-9203103Q2A"供应商 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)	1	1	1
Final electrical parameters (see 4.2)	1,2,3,4,5, <u>1</u> / 6,9,10,11	1,2,3,4,5, <u>1</u> / 6,9,10,11	1,2,3,4,5, <u>1</u> / 6,9,10,11
Group A test requirements (see 4.4)	1,2,3,4,5,6,9,10,11	1,2,3,4,5,6, 9,10,11	1,2,3,4,5,6, 9,10,11
Group C end-point electrical parameters (see 4.4)	1,2,3	1,2,3	1,2,3
Group D end-point electrical parameters (see 4.4)	1,2,3	1,2,3	1,2,3
Group E end-point electrical parameters (see 4.4)			

<sup>1/</sup> PDA applies to subgroup 1.

## 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.
- 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 <u>Qualification inspection for device classes Q and V</u>. 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 <u>Conformance inspection</u>. 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. Subgroups 7 and 8 in table I, method 5005 of MIL-STD-883 shall be omitted.

STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		5962-92031
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000		REVISION LEVEL B	SHEET 9

查询 'Goop Cinspection / The proper Cinspection 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.  $T_A = +125^{\circ}C$ , 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 <u>Group E inspection</u>. 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 postirradiation end-point electrical parameter limits as defined in table I at  $T_A = +25$ °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 <u>Packaging requirements</u>. 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 <u>Intended use</u>. Microcircuits conforming to this drawing are intended for use for Government microcircuit applications (original equipment), design applications, and logistics purposes.
- 6.1.1 Replaceability. Microcircuits covered by this drawing will replace the same generic device covered by a contractor prepared specification or drawing.
  - 6.1.2 <u>Substitutability</u>. Device class Q devices will replace device class M devices.
- 6.2 <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 using DD Form 1692, Engineering Change Proposal.
- 6.3 <u>Record of users</u>. 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 <u>Comments</u>. Comments on this drawing should be directed to DSCC-VA, Columbus, Ohio 43216-5000, or telephone (614) 692-0674.

STANDARD MICROCIRCUIT DRAWING DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000	SIZE <b>A</b>		5962-92031
		REVISION LEVEL B	SHEET 10

6.5 <u>Abbreviations, symbols, and definitions</u> . The abbreviation M <b>查用序5365</b> 259208 <b>MI3-CDBK供</b> 遊商	ons, symbols, and	definitions used herein are	defined in			
6.6 Sources of supply.						
6.6.1 <u>Sources of supply for device classes Q and V</u> . 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 <u>Approved sources of supply for device class M</u> . Appro The vendors listed in MIL-HDBK-103 have agreed to this drawi submitted to and accepted by DSCC-VA.	oved sources of sung and a certificat	pply for class M are listed i e of compliance (see 3.6 h	n MIL-HDBK-103. erein) has been			
STANDARD MICROCIRCUIT DRAWING	SIZE <b>A</b>		5962-92031			
DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO 43216-5000		REVISION LEVEL B	SHEET 11			
DSCC FORM 2234	!	-	• • •			

DATE: 01-02-22

Approved sources of supply for SMD 5962-92031 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	Vendor	Vendor
microcircuit drawing	CAGE	similar
PIN <u>1</u> /	number	PIN <u>2</u> /
5962-9203101MEA	01295	UC1864J/883
5962-9203101M2A	01295	UC1864L/883
5962-9203102MEA	<u>3</u> /	UC1865J/883
5962-9203103QEA	01295	UC1863J/883
5962-9203103Q2A	01295	UC1863L/883
5962-9203103VEA	01295	UC1863JQMLV
5962-9203103V2A	01295	UC1863LQMLV

- 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/ <u>Caution</u>. Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.
- 3/ Not available from an approved source of supply.

 Vendor CAGE
 Vendor name

 number
 and address

01295 Texas Instruments, Incorporated

13500 North Central Express way

P.O. Box 655303 Dallas, TX 75265

Point of contact: 6412 Highway 75 South

Sherman, TX 75090-0084

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