

REVISIONS

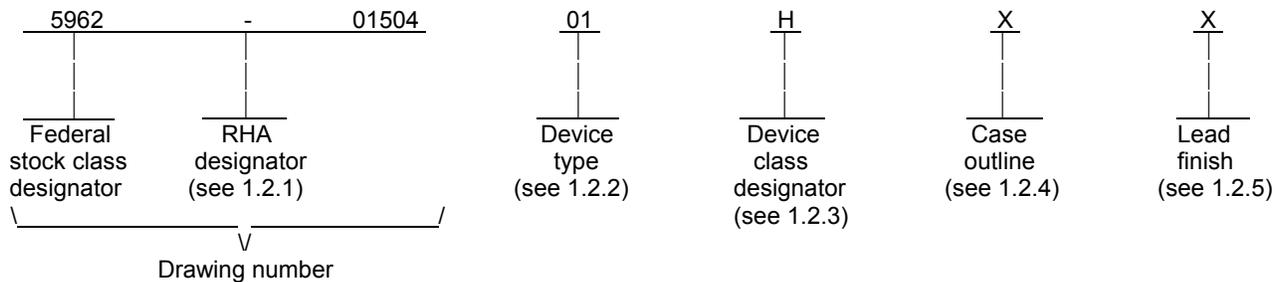
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
A	Added vendor cages U4388, 51651 and 57363. Added Resistance junction-to-case ($R_{\theta JC}$) to paragraph 1.3. Added paragraphs 3.2.7, 4.3.3.1, and 5.1.2. Changed paragraphs 1.2, 1.2.2, 1.2.3, 1.3, 1.4, 2.1, 3.1, 4.1, 4.1.1, 4.2, 4.3.3, and 4.3.6. Table I; made changes to the the tests $V_{GS(th)1}$, $V_{GS(th)2}$, $V_{GS(th)3}$, $R_{DS(ON)1}$, $R_{DS(ON)2}$, I_{DSS1} , $t_{d(ON)}$, t_r , $t_{d(off)}$, and t_f . Made changes to Figure 1. -sld	05-12-07	Raymond Monnin
B	Table I; Changed the max limit for the Static drain to source "on" state resistance tests $R_{DS(ON)1}$ from .22 Ω max to .25 Ω max and $R_{DS(ON)2}$ from .45 Ω max to .465 Ω max. -sld	07-09-17	Robert M. Heber
C	Table I: Turn off delay time, change the max limit of 235 ns to 265 ns and Fall time, change the max limit of 90 ns to 95 ns. -gz	11-07-11	Charles F. Saffle
D	Correct paragraph 1.3, Resistance, junction to case, change 0.7°C/W to 1.2°C/W. -gz	11-08-01	Charles F. Saffle

REV																			
SHEET																			
REV	D	D																	
SHEET	15	16																	
REV STATUS OF SHEETS	REV			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
	SHEET			1	2	3	4	5	6	7	8	9	10	11	12	13	14		
PMIC N/A	PREPARED BY Steve L. Duncan					<p align="center">DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990 http://www.landandmaritime.dla.mil/</p> <p align="center">MICROCIRCUIT, HYBRID, CUSTOM, FIELD EFFECT TRANSISTOR, 500 VOLT, WITH GATE PROTECTION</p>													
<p align="center">STANDARD MICROCIRCUIT DRAWING</p> <p>THIS DRAWING IS AVAILABLE FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE</p>	CHECKED BY Greg Cecil																		
	APPROVED BY Raymond Monnin																		
	DRAWING APPROVAL DATE 01-03-05																		
AMSC N/A	REVISION LEVEL D					SIZE A	CAGE CODE 67268	5962-01504											
						SHEET 1 OF 16													

1. SCOPE

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

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



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

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

<u>Device type</u>	<u>Vendor similar PIN</u>	<u>Circuit function</u>
01	12787, NHI-1671, MSK1667H	Field Effect Transistor, 500 V, N-channel with gate protection circuitry

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

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

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

<u>Outline letter</u>	<u>Descriptive designator</u>	<u>Terminals</u>	<u>Package style</u>
X	See figure 1	4 or 10 <u>1/</u>	Hybrid package

1.2.5 Lead finish. The lead finish shall be as specified in MIL-PRF-38534 and figure 1 herein.

1.3 Absolute maximum ratings. 2/

Power dissipation (P_D) <u>3/</u>	25 W
Breakdown voltage, drain to source ($V_{(BR)VSS}$)	500 V dc minimum
Gate to source voltage range (V_{GS})	± 14.2 V dc
Source drain diode voltage (V_{DS})	500 V dc
Drain current maximum <u>4/</u>	12 A dc
Pulsed drain current maximum <u>5/</u>	30 A dc
Junction temperature (T_J)	+150°C
Isolation voltage (V_{ISO}) 70000 ft altitude	500 V dc
Resistance, junction to case ($R_{\theta JC}$) <u>6/</u>	1.2°C/W
Lead temperature (T_L): 0.063 inches (1.60 mm) from case for 10 seconds	+300°C
Case operating temperature range (T_C)	-55°C to +125°C
Storage temperature range	-55°C to +150°C

1.4 Recommended operating conditions.

Gate to source voltage, threshold range ($V_{GS(th)1}$)	+2.0 V dc to +4.0 V dc
Source current (I_S)	8.0 A dc steady state, 20 A peak pulsed
Drain current (I_{D1}) $T_C = +25^\circ C$	8.0 A dc steady state, 20 A peak pulsed

- 1/ For the 10 lead package, configuration B in figure 1, pins 1 through 4 are tied together for the DRAIN (pin 1) and pins 5 through 8 are tied together for the SOURCE (pin 2).
- 2/ 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.
- 3/ Derate linearly 0.16W/°C for $T_C > +25^\circ C$. $P_D = T_J - T_C / R_{\theta JC}$.
- 4/ Repetitive rating, pulse width limited by maximum junction temperature.
- 5/ Pulsed. Conditions for pulse measurement shall be as specified in section 4 of MIL-STD-750.
- 6/ When tested per method 3161 of MIL-STD-750, with the following conditions:
 $I_M = 10$ mA, $I_H = 3$ A, $t_H = 15$ seconds, $V_H = 8.4$ V, $t_{MD} = 100$ μ s, and $t_{SW} = 10$ μ s.

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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 SPECIFICATION

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

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-750 - Test Method Standard for Semiconductor Devices.
 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 <https://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation.

ELECTRONICS INDUSTRIES ALLIANCE (EIA)

JESD22-A101 - Steady State Temperature Humidity Bias Life Test.
 JESD22-A110 - Test Method A110 Highly Accelerated Temperature and Humidity Stress Test (HAST).
 JESD22-A113 - Test Method A113 Preconditioning of Plastic Surface Mount Devices Prior to Reliability Testing.
 JESD22-B101 - Test Method B101 External Visual.
 J-STD-033 - Standard for Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices.

(Copies of these documents are available online at <http://www.jedec.org/> or from the Electronics Industries Alliance, 2500 Wilson Boulevard, Arlington, VA 22201-3834).

2.3 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. Class D parts are defined by the requirements as specified in 4.3.6 and herein. Class D, non-hermetic parts supplied to this drawing shall meet the requirements of this drawing however, tests which are relevant to non-hermetic technologies should be used.

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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 Schematic diagram. The schematic diagram shall be as specified on figure 3.

3.2.4 Switching waveform. The switching waveform shall be as specified on figure 4.

3.2.5 Rework. The rework requirements shall be in accordance with MIL-PRF-38534 except that the limits on polymer element replacement shall not apply as long as the substrate material is not damaged and all the bond pads are inspected in accordance with documented inspection requirements prior to the installment of the replacement components.

3.2.6 Unique circuit elements. The circuit elements in the following table are unique to this application and are not adequately verifiable by testing the completed part, and shall not be substituted:

Device type	Reference Designator as specified on Figure 3	Part Number (Source)
01	Q1	APT5020DN (ODY74)

3.2.7 High voltage spacing details. These parts are intended for high altitude, high voltage applications in extreme environmental conditions. Internal conductors over 200 V shall have a .007 inch minimum spacing between any other conductive surface. Layout dimensions shall be available for user verification of dimensions. If the internal cavity contains helium, the helium shall be 15 percent by volume maximum. Critical spacing for external dimensions shall be as defined in figure 1.

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.

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TABLE I. Electrical performance characteristics.

Test	Symbol 1/	Conditions 1/ -55°C ≤ T _C ≤ +125°C unless otherwise specified	Group A subgroups	Device type	Limits		Unit
					Min	Max	
Breakdown voltage, drain to source	V _{(BR)DSS}	Method 3407, Bias condition C, V _{GS} = 0 V dc, I _D = 250 μA dc	1	01	500		V dc
Gate to source voltage (threshold)	V _{GS(th)1}	Method 3403, V _{DS} = V _{GS} , I _D = 1.0 mA dc	1	01	2.0	4.0	V dc
	V _{GS(th)2}		2		1.0		
	V _{GS(th)3}		3			5.0	
Gate Current	I _{GSS1}	Method 3411, V _G is applied with respect to V _{GATE_RTN} , V _{DS} = 0, V _{GS} = +10 V dc	1,2,3	01	0.9	1.1	mA
	I _{GSS2}	Method 3411, V _G is applied with respect to V _{GATE_RTN} , V _{DS} = 0, V _{GS} = -10 V dc			-1.1	-0.9	
Gate Protection	V _{GZ}	Method 3411, V _G is applied with respect to V _{GATE_RTN} , V _{DS} = 0, I _G = 10 mA dc	1,2,3	01	13.8	18.5	V
		Method 3411, V _G is applied with respect to V _{GATE_RTN} , V _{DS} = 0, I _G = -10 mA dc			-18.5	-13.8	
Static drain to source "on" state resistance	R _{DS(ON)1}	Method 3421, Condition A, Pulsed, V _{GS} = 10 V dc, I _D = 8 A dc	1	01		0.25	Ω
	R _{DS(ON)2}		2			0.465	
Forward voltage (source drain diode)	V _{SD}	Method 4011, V _{GS} = 0 V dc, I _F = 1.0 A dc	1	01		1.3	V dc
Drain Current (leakage)	I _{DSS1}	Method 3413, Bias condition C, V _{GS} = 0 V dc, V _{DS} = 100% V _{(BR)DSS}	1	01		250	μA dc
	I _{DSS2}	Method 3413, Bias condition C, V _{GS} = 0 V dc, V _{DS} = 80% V _{(BR)DSS}	2			1000	
Turn on delay time	t _{d(ON)}	Method 3472, R _G = 6 Ω, I _D = 4.0 A, V _{GS} = 15 V dc, V _{DD} = 50 percent of V _{(BR)DSS} , R _L = V _{DD} /I _D , See figure 4	9	01		49	ns
Rise time	t _r					64	
Turn off delay time	t _{d(off)}					265	
Fall time	t _f					95	

1/ Symbol definitions, methods, and conditions are in accordance with MIL-STD-750.

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Configuration A.

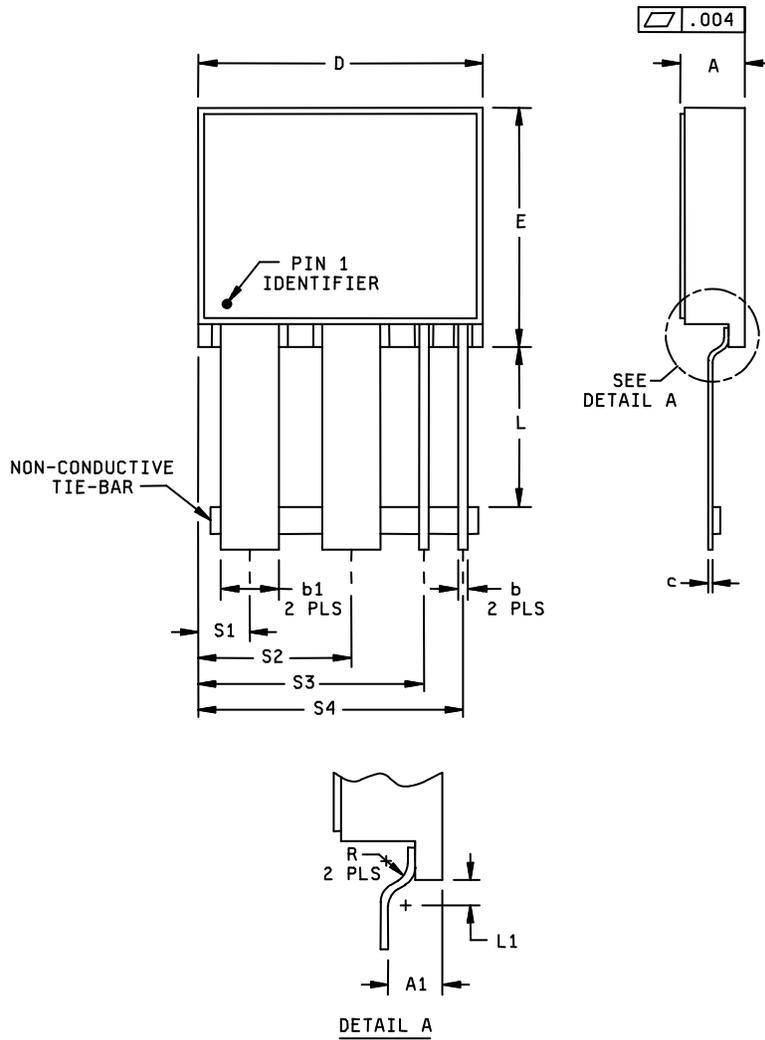


FIGURE 1. Case outline(s).

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Configuration A - Continued.

Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A		.180		4.58
A1	.105	.125	2.67	3.18
b	.015	.025	0.38	0.64
b1	.150	.175	3.81	4.45
c	.008	.012	0.20	0.30
D	.690	.705	17.53	17.91
E	.600	.620	15.24	15.75
L	.400		10.16	
L1		.030		0.76
R	.015		0.38	
S1	.115	.135	2.92	3.43
S2	.365	.385	9.27	9.78
S3	.540	.560	13.72	14.22
S4	.640	.660	16.26	16.76

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. Spacing between leads, and from the leads to the package bottom, or other exposed metal shall be .030 inches (0.76 mm) minimum from any other metal surface.
3. Case X weight: 12 grams maximum.
4. All exposed metal portions of the case and package bottom shall be electrically isolated.
5. Nonconductive tie bar allowed on top or bottom of the leads.

FIGURE 1. Case outline(s) - Continued.

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Configuration B.

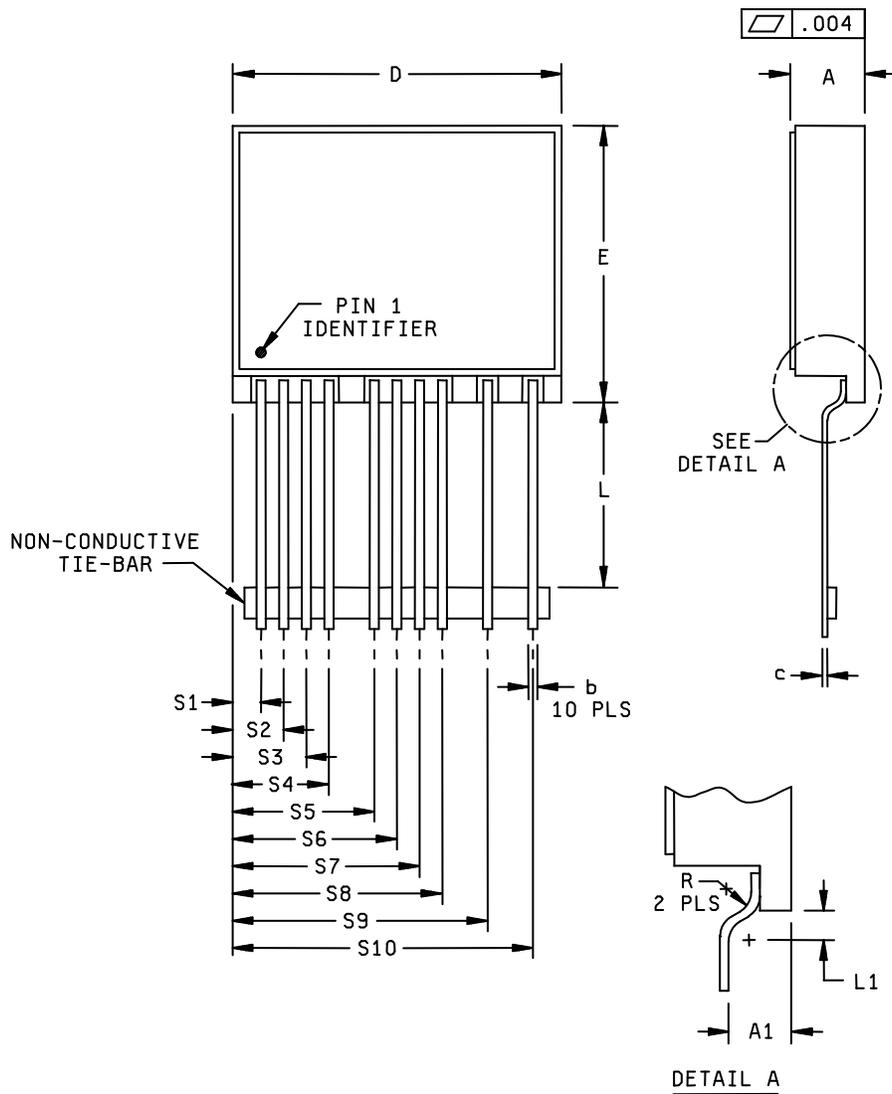


FIGURE 1. Case outline(s) - Continued.

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Configuration B - Continued.

Symbol	Inches		Millimeters	
	Min	Max	Min	Max
A		.180		4.58
A1	.105	.125	2.67	3.18
b	.015	.025	0.38	0.64
c	.008	.012	0.20	0.30
D	.690	.705	17.53	17.91
E	.600	.620	15.24	15.75
L	.400		10.16	
L1		.030		0.76
R	.015		0.38	
S1	.035	.065	0.88	1.65
S2	.085	.115	2.15	2.92
S3	.135	.165	3.42	4.19
S4	.185	.215	4.69	5.46
S5	.285	.315	7.23	8.00
S6	.335	.365	8.50	9.27
S7	.385	.415	9.77	10.54
S8	.435	.465	11.04	11.81
S9	.535	.565	13.58	14.35
S10	.635	.665	16.12	16.89

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. Spacing between leads, and from the leads to the package bottom, or other exposed metal shall be .030 inches (.76 mm) minimum from any other metal surface.
3. Case X weight: 12 grams maximum.
4. All exposed metal portions of the case and package bottom shall be electrically isolated.
5. Non-conductive tie bar allowed on top or bottom of the leads.

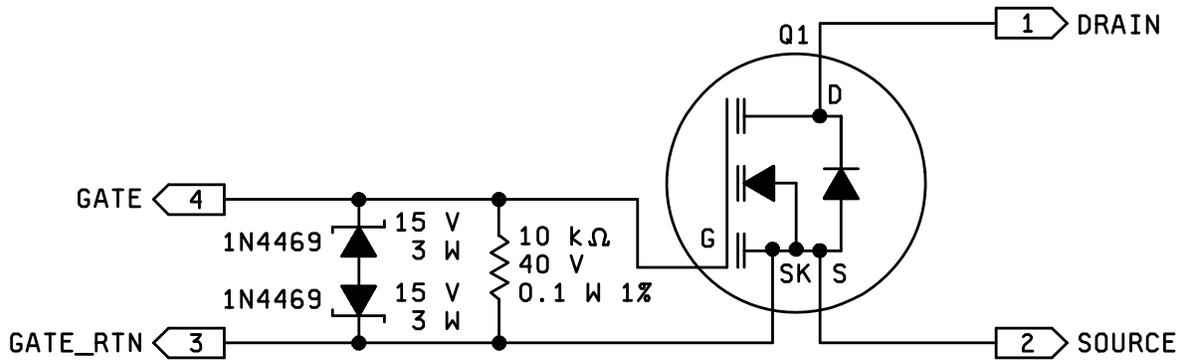
FIGURE 1. Case outline(s) - Continued.

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Device type	01
Case outline	X
Terminal number	Terminal symbol
1	Drain
2	Source
3	Gate Rtn
4	Gate

FIGURE 2. Terminal connections.

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NOTE: The Q1 part number is defined in paragraph 3.2.6.

FIGURE 3. Schematic diagram.

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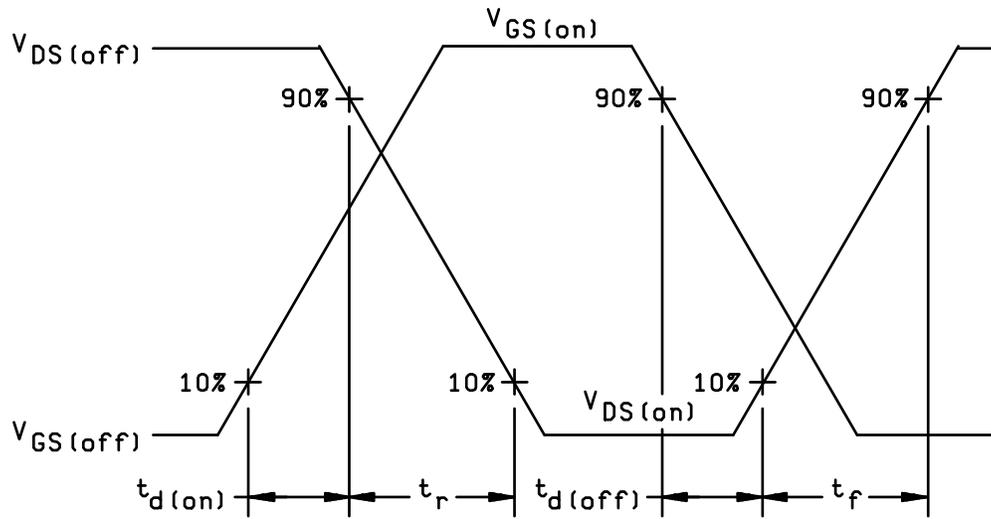


FIGURE 4. Switching waveform.

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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, 9
Group A test requirements	1, 2, 3, 9
Group C end-point electrical parameters	1, 2, 3, 9
End-point electrical parameters for Radiation Hardness Assurance (RHA) devices	Not applicable

* PDA applies to subgroup 1.

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. As a minimum, all classes shall have thermal shock and temperature cycling test conditions that reflect the rated temperature range of the device.

4.1.1 Incoming. The elements used in the construction of this device shall meet the requirements of element evaluation of MIL-PRF-38534. The manufacturer's DLA Land and Maritime-VQ approved alternate element evaluation is acceptable.

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

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

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

(2) T_A shall be +125°C minimum. Classes H, K, G, and E shall be 160 hours minimum. Class D shall be 96 hours minimum.

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.

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

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

- a. Tests shall be as specified in table II herein.
- b. Subgroups 4, 5, 6, 7, 8A, 8B, 10, and 11 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_A as specified in accordance with table I of method 1005 of MIL-STD-883.
 - (3) Test duration: 1,000 hours for classes H, K, G, D, and E.

4.3.3.1 Additional Group C testing for (Class D) non-hermetic devices. Class D, non-hermetic devices shall have the following additional testing performed in the sequence shown below. This testing is considered destructive:

<u>Test</u>	<u>Method</u>	<u>Condition</u>	<u>QTY(accept number)</u>
Preconditioning	JESD22-A113	Soak condition 1	
External visual inspection	JESD22-B101		5 (0)
HAST	JESD22-A110*	96 hours, 130°C, 85% RH, with screening bias herein	
Electrical requirements per table II herein			5 (0)

* 1000 hours of 85°C, 85% RH testing per JESD22-A101 may be substituted. Same bias applies.

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.

4.3.6 Class D definition. Hybrids purchased as class D to this specification shall meet all the electrical requirements and temperature ratings stated herein. The following details apply:

- (1) Non-hermetic devices are allowed.
- (2) The reliability of the product shall be based on the manufacturer's documented internal flow.
- (3) Constant acceleration, Test method 2001 of MIL-STD-883 is not required.

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5. PACKAGING

5.1 Packaging requirements. The requirements for packaging shall be in accordance with MIL-PRF-38534. In addition, the parts shall be packaged individually.

5.1.2 Packaging of (Class D) non-hermetic devices. As a minimum, Class D, non-hermetic parts shall be sealed in a moisture barrier bag (MBB) with desiccant and moisture indicator per J-STD-033.

6. NOTES

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

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

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

6.4 Record of users. Military and industrial users shall inform DLA Land and Maritime when a system application requires configuration control and the applicable SMD. DLA Land and Maritime will maintain a record of users and this list will be used for coordination and distribution of changes to the drawings. Users of drawings covering microelectronic devices (FSC 5962) should contact DLA Land and Maritime-VA, telephone (614) 692-0547.

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.

STANDARD MICROCIRCUIT DRAWING DLA LAND AND MARITIME COLUMBUS, OHIO 43218-3990	SIZE A		5962-01504
		REVISION LEVEL D	SHEET 16

STANDARD MICROCIRCUIT DRAWING BULLETIN

DATE: 11-08-01

Approved sources of supply for SMD 5962-01504 are listed below for immediate acquisition information only and shall be added to MIL-HDBK-103 and QML-38534 during the next revisions. MIL-HDBK-103 and QML-38534 will be revised to include the addition or deletion of sources. The vendors listed below have agreed to this drawing and a certificate of compliance has been submitted to and accepted by DLA Land and Maritime-VA. This information bulletin is superseded by the next dated revisions of MIL-HDBK-103 and QML-38534. DLA Land and Maritime maintains an online database of all current sources of supply at <http://www.landandmaritime.dla.mil/Programs/Smcr/>

Standard microcircuit drawing PIN <u>1/</u>	Vendor CAGE number	Vendor similar PIN <u>2/</u>
5962-0150401DXA	<u>3/</u>	2305225-1
5962-0150401HXC 5962-0150401HXC 5962-0150401HXC	51651 <u>3/</u> <u>3/</u>	MSK 1667H 12787 NHI-1671

- 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/ Not available from an approved source.

Vendor CAGE number

51651

Vendor name and address

M.S. Kennedy Corporation
4707 Dey Road
Liverpool, NY 13088

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