

REVISIONS

Letter	ECO No.	Description	Checked	Approved	Date
A	36-472	INITIAL RELEASE	FJK	RFG	1/25/96
B	36-490	ADD SHIELDING INFORMATION FOR A TO D CONVERTER	FJK	RFG	2/9/96
C	36-665	CHANGE DAC8800 BOTTOM SHIELD TO AS-BUILT CONFIGURATION	FJK	WFM	6/11/96
D	36-675	DELETE REQUIREMENT FOR GOLD PLATING ON TANTALUM	FJK	<i>RFG</i>	6/24/96

NAME	DATE	MASSACHUSETTS INSTITUTE OF TECHNOLOGY CENTER FOR SPACE RESEARCH			
Drawn: BRIAN KLATT	1/23/96	<h3 style="margin: 0;">RADIATION SHIELDING AND MARKING</h3>			
Checked: F. Kasparian	1/23/96				
Approved: R. F. Goeke	1/23/96				
Released: W. Mayer	1/23/96				
		Size	Code Identification No.	Drawing No.	Rev.
		T	80230	36-02340	D
		Scale: NONE		Sheet: 1 of 5	

1.0 SCOPE

This specification details the requirements for radiation shielding and remarking of electronic parts.

2.0 APPLICABLE DOCUMENTS

2.1 Drawings The following documents form a part of this specification to the extent specified herein.

SPECIFICATIONS

MIL-M-38510	Microcircuits, General Specification for
MIL-M-38510/105	Microcircuit, Linear, CMOS, High Level Analog Switch with Driver, Monolithic, Silicon
36-02301	Microcircuit, Linear, CMOS, 12-Bit A/D Converter
36-02307	Microcircuit, Linear, Dual Operational Amplifier, Monolithic, Silicon (OP220)

OTHER

0291 3251GTE30M	Analog Devices/Precision Monolithics Data Book, Volume 10, Analog Integrated Circuits
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3.0 REQUIREMENTS

SHIELDING

- 3.1.1 Shield material shall be tantalum.
- 3.1.2 The radiation shielding shall be applied to the microcircuit package, covering the die and cavity, as detailed in figure 1 for the applicable part. The shaded area is to be shielded, top and/or bottom, per table 2
- 3.1.3 Shielding material shall be as detailed in table 2.
- 3.1.4 Shielding material shall be attached with Epon 828.

3.2 MARKING

3.2.1 Parts shall be remarked with the original marking from the part manufacturer plus the MIT shielded part number. If the top of the part precludes the original marking plus the MIT shielded part number, the marking priority shall be in accordance with Table 1.

Table 1

PRIORITY	MARKING	INFORMATION OBTAINED FROM
1	Pin 1 identification mark	original marking on part
2	MIT shielded part number	Table 2
3	Serial Number	original marking on part
4	Lot/Date Code	original marking on part
5	Procurement Part Number	original marking on part
6	Other original part markings	original marking on part

3.2.2 Marking shall meet the legibility and marking permanency requirements of MIL-M-38510, paragraph 3.6.

Table 2

Generic P/N	CS5012A	DAC8800	OP-220	IH5143
Purchase P/N	36-02301	DAC8800BR/883	36-02307	M38510/ 10504BEA
MIT shielded P/N	36-02340.01	36-02340.02	36-02340.03	36-02340.04
Package Type	Quad Flat-Pack	20 Lead Cer-Dip	8 Lead Cer-Dip	16 Lead Cer-Dip
Nominal Shielding Length	.625"	.290"	.380"	.465"
Nominal Shielding Width	.625"	.290"	.290"	.290"
Top Tantalum Thickness	.020"	.080"	.020"	.020"
Bottom Tantalum Thickness	NONE	NONE	.020"	.020"

4.0 QUALITY ASSURANCE PROVISIONS

- 4.1 Responsibility for compliance Items submitted for acceptance to MIT shall meet all requirements of this specification.
- 4.2 Fabrication Records Fabrication documentation (travelers) shall be submitted to MIT with the delivery of each lot of parts. In addition, the supplier shall maintain fabrication documentation records for 36 months after hardware delivery to MIT.

5.0 PREPARATION FOR DELIVERY

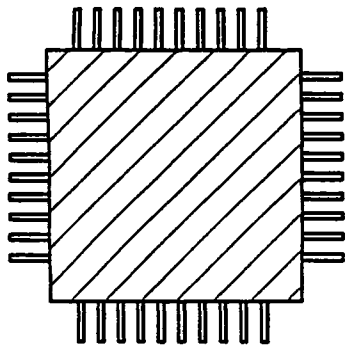
- 5.1 Packaging requirements Packaging shall be in accordance with paragraph 5.1 of MIL-M-38510.

6.0 NOTES

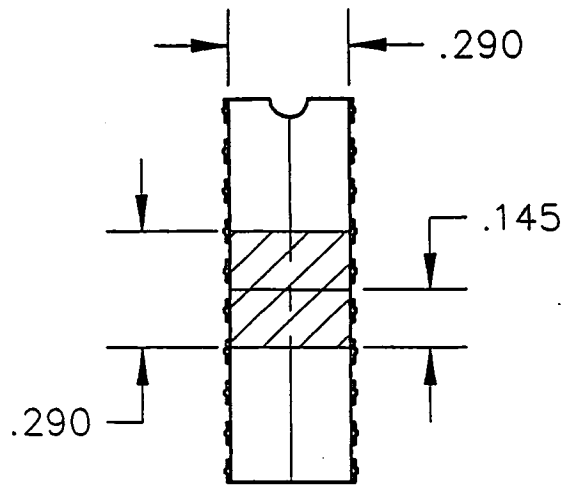
- 6.1 Unshielded parts will be supplied by MIT
- 6.2 Approved Source of Supply The manufacturer listed below is the only approved source for products described herein.

Interpoint Corporation
10301 Willows Road
Redmond, WA. 98073

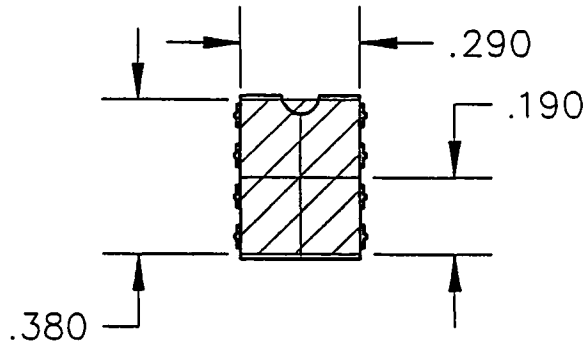
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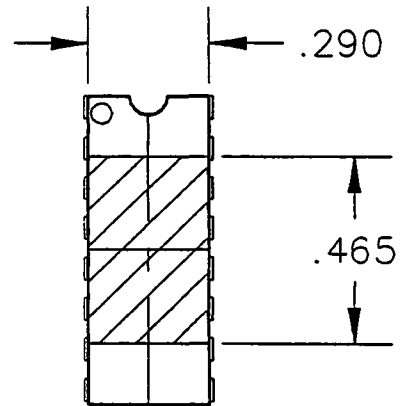
36-02340.01
36-02301



36-02340.02
DAC8800BR/883



36-02340.03
36-02307



36-02340.04
M38510/10504BEA

SIZE A	FSCM NO. 80230	DWG. NO. 36-02340	REV. B
SCALE 2/1		SHEET	