THRESHOLD DEFINITION

![Graph showing threshold levels with Vout, EMI, and SIG axes.](image)

- High: 2.0 V
- Unk: 0.8 V
- Low: 0.0 V

Vt1 Immunity Lvl
Vt2 Immunity Lvl
THRESHOLD DEFINITION
BIAS TEE FUNCTION

EMI Sig In → [Box] → EMI Sig

DC & Msnt

DOD E3 Program Review 13 April 2000
J. Sketoe, Boeing Co. A. Clark, NASA, MFSC
ZBFT-6G, S/N 1-20

ZBFT-6G, S/N 1-20

GHz

dB Gain

Series 1
Series 2
Series 3
Series 4
Series 5
Series 6
Series 7
Series 8
Series 9
Series 10
Series 11
Series 12
Series 13
Series 14
Series 15
Series 16
Series 17
Series 18
Series 19
Series 20
TEST SET-UP
EDM TEST FIXTURE
EMI IMMUNITY LEVELS

Chart 1. EMI IMMUNITY LEVEL
7400 NAND GATES

![Graph showing EMI immunity levels over frequency](image-url)
EMI IMMUNITY LEVELS

Chart 2. EMI IMMUNITY LEVEL
74ALS00 NAND GATES

Immune Level [dBm]

Frequency [MHz]
TTL vs. LS IMMUNITY LEVELS

Chart 5. EMI IMMUNITY LEVEL
7402 POS NOR GATES

Chart 6. EMI IMMUNITY LEVEL
74LS02 POS NOR GATES

Chart 7. EMI IMMUNITY LEVEL
7404 TOTEM POLE INVERTER

Chart 8. EMI IMMUNITY LEVEL
74LS04 TOTEM POLE INVERTER

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TP vs. OC IMMUNITY LEVELS

Chart 7. EMI IMMUNITY LEVEL
7404 TOTEM POLE INVERTER

Chart 8. EMI IMMUNITY LEVEL
74LS04 TOTEM POLE INVERTER

Chart 9. EMI IMMUNITY LEVEL
7405 OPEN COLLECTOR INVERTER

Chart 10. EMI IMMUNITY
74LS06 OPEN COLLECTOR INVERTER

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7805 VOLT REG IMMUNITY

Chart 11. EMI IMMUNITY LEVEL
7805 VOLTAGE REGULATOR

<table>
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<tr>
<th>Frequency [MHz]</th>
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<tbody>
<tr>
<td>10</td>
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<tr>
<td>100</td>
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<tr>
<td>1,000</td>
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<table>
<thead>
<tr>
<th>Immune Level [dBm]</th>
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<tbody>
<tr>
<td>30.0</td>
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<tr>
<td>25.0</td>
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<tr>
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<tr>
<td>5.0</td>
</tr>
<tr>
<td>0.0</td>
</tr>
<tr>
<td>-5.0</td>
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</tbody>
</table>

- Vo=Vt1
- Vo=Vt2
- 70's Data

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# SEVENTIES CHIP SET

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>TTL:</strong></td>
<td>7400, 7402, 7404, 7405, 7408, 7432, 7450, 7473, &amp; 7479</td>
<td>9</td>
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<tr>
<td><strong>CMOS:</strong></td>
<td>4011A, 4011B, 4007A, 4007B, 4001A, &amp; 4013A</td>
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<td><strong>Line drvr/rcvr:</strong></td>
<td>8830/8820, 9614/9615, 55109/55107A, &amp; 55110</td>
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<td><strong>Op Amps:</strong></td>
<td>741, 108A, 201A, 0042C, &amp; 531</td>
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<td><strong>Voltage Reg:</strong></td>
<td>(3-pin) 309, 320, 78M05, (8-pin) 300, &amp; 305</td>
<td>5</td>
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<tr>
<td><strong>Comparators:</strong></td>
<td>306, 311, 339, 360, 710, &amp; 760</td>
<td>6</td>
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<tr>
<td><strong>TOTAL NUMBER TYPES</strong></td>
<td></td>
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