

Testing Summary of the DS90C031 LVDS Transmitter at BNL, May 23, 1998

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Three different devices were used for this test, from two lots. S/N LVT1 and LVT2 were packaged in SOIC's and LVT4 was packaged in an LCC. All runs were 10^7 ions/cm² unless the device latched. All runs used 283 MeV Br-79.

BNL Run #	File Name	Pattern	Angle	LET	Fluence	Latch	Latch Current (mA)
89	LVT1B1	0	0	37.2	10^7	NO	
90	LVT1B2	0	45	52.7	10^7	NO	
91	LVT1B3	0	60	74.5	3.8×10^6	YES	25
92	LVT1B4	1	60	74.5	4.8×10^5	YES	25
93	LVT2B1	1	0	37.2	10^7	NO	
94	LVT2B2	1	45	52.7	1.4×10^6	YES	
95	LVT4B1	1	0	37.2	10^7	NO	
96	LVT4B2	1	30	43	10^7	NO	
97	LVT4B3	1	60	74.5	3.7×10^5	YES	27, 27 two latches
98	LVT4B4	1	45	52.6	2.1×10^6	YES	27, 26 two latches

After some runs, a 50,000 pulse test was transmitted through the system. In some cases the part remained functional, in others it didn't. The device's latchup current remained unchanged while the data inputs were toggled. The devices were kept in the enable configuration continuously.

The following is a sample latchup, from Run # 91.

DS90C031 Heavy Ion Test
NASA/GSFC
May 23, 1998
BNL
Bromine, 60 Deg.
LET=74.5 MeV-cm²/mg

