

RHMSI 8-Bit and 16-Bit Logic ESD Performance

1.0 Overview

In order to meet size and speed requirements of today's high speed circuit designers, ESD performance has often been sacrificed by microcircuit providers. The tables 1 and 2 contain the listings of the MSI product line ESD performance.

2.0 ESD Performance Cross Reference

Table 1 lists Aeroflex RHMSI 8-Bit and 16-Bit Logic devices and their respective ESD performance. All Aeroflex Colorado Springs Logic Family devices have ESD tests performed as part of Qualification per MIL-STD-883, using the Human Body Model (HBM).

Table 1. Summary of ESD Performance for Aeroflex 16-Bit MSI Logic Devices

Part Number	SMD	Device Types	ESD Voltage	ESD Class	Description
UT54ACTQ16224	5962-06243	01	500V	1B	CMOS 16-bit Buffer/Line Driver, TTL Inputs, and Three-State Quiet Outputs
UT54ACTQ16245	5962-06244	01	500V	1B	16-bit Bidirectional Transceiver, TTL Inputs, and Three-State Quiet Outputs
UT54ACTQ16374	5962-06245	01	500V	1B	CMOS 16-bit D Flip-Flop TTL Inputs, and Three-State Quiet Outputs
UT54ACS164646S	5962-06234	01	500V	1B	Schmitt CMOS 16-bit Bidirectional MultiPurpose Registered Transceiver, with cold/warm spare
UT54ACS162245SLV	5962-02543	01	1500V	1C	Schmitt CMOS 16-bit Bidirectional MultiPurpose Low Voltage Transceiver, with cold/warm spare
UT54ACS164245S/SE	5962-98580	01, 02, 03, 04, 05	1500V	1C	CMOS 16-bit Bidirectional MultiPurpose Transceiver with cold spare
UT54ACS164245SEI	5962-98580	06, 07	1500V	1C	CMOS 16-bit Bidirectional MultiPurpose Transceiver with cold/warm spare

Table 2. Summary of ESD Performance for Aeroflex 8-Bit MSI Logic Devices

Part Number	SMD	Device Types	ESD Voltage	ESD Class	Description
UT54ACS00	5962-96512	01	500V	1B	Logic quadruple 2-input NAND gates
UT54ACTS00	5962-96513	01	500V	1B	
UT54ACTS00E*	5962-96513	02, 03	2000V	2	
UT54ACS02	5962-96514	01	500V	1B	Logic quadruple 2-input NOR gates
UT54ACS02E*	5962-96514	02, 03	500V	1B	
UT54ACTS02	5962-96515	01	500V	1B	
UT54ACTS02E*	5962-96515	02, 03	500V	1B	
UT54ACS04	5962-96516	01	500V	1B	Hex inverters
UT54ACTS04	5962-96517	01	500V	1B	
UT54ACTS04E*	5962-96517	02, 03	2000V	2	
UT54ACS08	5962-96518	01	500V	1B	Logic quadruple 2-input AND gates
UT54ACS08E*	5962-96518	02, 03	500V	1B	
UT54ACTS08	5962-96519	01	500V	1B	
UT54ACTS08E*	5962-96519	02, 03	500V	1B	
UT54ACS10	5962-96520	01	500V	1B	Logic triple 3-input NAND gates
UT54ACTS10	5962-96521	01	500V	1B	
UT54ACS11	5962-96522	01	500V	1B	Logic triple 3-input AND gates
UT54ACTS11	5962-96523	01	500V	1B	
UT54ACS14	5962-96524	01	500V	1B	Hex inverting Schmitt trigger
UT54ACS14E*	5962-96524	02, 03	1000V	1C	
UT54ACTS14	5962-96525	01	500V	1B	
UT54ACTS14E*	5962-96525	02, 03	1000V	1C	
UT54ACS20	5962-96526	01	500V	1B	Logic dual 4-input NAND gates
UT54ACTS20	5962-96527	01	500V	1B	
UT54ACS27	5962-96528	01	500V	1B	Logic triple 3-input NOR gates
UT54ACTS27	5962-96529	01	500V	1B	
UT54ACS34	5962-96530	01	500V	1B	Hex non-inverting buffers
UT54ACTS34	5962-96531	01	500V	1B	
UT54ACS54	5962-96532	01	500V	1B	Logic 4-wide AND-OR-INVERT gates
UT54ACTS54	5962-96533	01	500V	1B	
UT54ACS74	5962-96534	01	500V	1B	FLIP-FLOPs dual D with clear and preset
UT54ACTS74	5962-96535	01	500V	1B	
UT54ACTS74E*	5962-96535	02, 03	1000V	1C	
UT54ACS85	5962-96536	01	500V	1B	Comparators 4-bit
UT54ACTS85	5962-96537	01	500V	1B	
UT54ACS86	5962-96538	01	500V	1B	Logic quadruple 2-input XOR gates
UT54ACTS86	5962-96539	01	500V	1B	
UT54ACS109	5962-96540	01	500V	1B	FLIP-FLOPs dual J-K
UT54ACS109E*	5962-96540	02, 03	1000V	1C	
UT54ACTS109	5962-96541	01	500V	1B	
UT54ACS132	5962-96542	01	500V	1B	Logic quadruple 2-Input NAND with Schmitt triggers
UT54ACS132E*	5962-96542	02, 03	500V	1B	
UT54ACTS132	5962-96543	01	500V	1B	
UT54ACS138	5962-96544	01	500V	1B	Decoders/demultiplexers 3-line to 8-line
UT54ACS138E*	5962-96544	02, 03	2000V	2	
UT54ACTS138	5962-96545	01	500V	1B	
UT54ACS139	5962-96546	01	500V	1B	Decoders/demultiplexers dual 2-line to 4-line
UT54ACTS139	5962-96547	01	500V	1B	

UT54ACS151	5962-96548	01	500V	1B	Data selectors/multiplexers 1 to 8
UT54ACTS151	5962-96549	01	500V	1B	
UT54ACS153	5962-96550	01	500V	1B	Multiplexers 4-input dual
UT54ACTS153	5962-96551	01	500V	1B	
UT54ACTS153E*	5962-96551	02, 03	500V	1B	
UT54ACS157	5962-96552	01	500V	1B	Multiplexers quadruple 2 to 1
UT54ACTS157	5962-96553	01	500V	1B	
UT54ACTS157E*	5962-96553	02, 03	500V	1B	
UT54ACS163	5962-96554	01	500V	1B	Counters 4-bit synchronous
UT54ACTS163	5962-96555	01	500V	1B	
UT54ACS164	5962-96556	01	500V	1B	Registers 8-bit shift
UT54ACS164E*	5962-96556	02, 03	500V	1B	
UT54ACTS164	5962-96557	01	500V	1B	
UT54ACTS164E*	5962-96557	02, 03	500V	1B	
UT54ACS165	5962-96558	01	500V	1B	Registers 8-bit shift parallel
UT54ACS165E*	5962-96558	02, 03	1000V	1C	
UT54ACTS165	5962-96559	01	500V	1B	Counters 4-bit binary up-down
UT54ACS169	5962-96560	01	500V	1B	
UT54ACTS169	5962-96561	01	500V	1B	
UT54ACS190	5962-96562	01	500V	1B	Counters up-down BCD synchronous 4-bit
UT54ACTS190	5962-96563	01	500V	1B	
UT54ACS191	5962-96564	01	500V	1B	Counters up-down binary synchronous 4-bit
UT54ACTS191	5962-96565	01	500V	1B	
UT54ACS193	5962-96566	01	500V	1B	Clocks up-down synchronous 4-bit
UT54ACS193E*	5962-96566	02, 03	1000V	1C	
UT54ACTS193	5962-96567	01	500V	1B	
UT54ACTS220	5962-96753	01	500V	1B	Clock and wait-state generation circuit
UT54ACS240	5962-96568	01	500V	1B	Buffers octal with inverted 3-state outputs
UT54ACTS240	5962-96569	01	500V	1B	
UT54ACS244	5962-96570	01	500V	1B	Buffers/line drivers octal with 3-state outputs
UT54ACTS244	5962-96571	01	500V	1B	
UT54ACS245	5962-96572	01	500V	1B	Transceivers octal bus with 3-state outputs
UT54ACTS245	5962-96573	01	500V	1B	
UT54ACTS245E*	5962-96573	02, 03	500V	1B	
UT54ACS245S	5962-96572	01	500V	1B	Transceivers octal bus Schmitt trigger with 3-state outputs
UT54ACS253	5962-96574	01	500V	1B	Multiplexers 4-input dual with 3-state outputs
UT54ACTS253	5962-96575	01	500V	1B	
UT54ACS264	5962-96576	01	500V	1B	Look-ahead carry generator for counters
UT54ACTS264	5962-96577	01	500V	1B	
UT54ACS273	5962-96578	01	500V	1B	FLIP-FLOPs octal D with clear
UT54ACTS273	5962-96579	01	500V	1B	
UT54ACS279	5962-96580	01	500V	1B	Latches quadruple S-R
UT54ACTS279	5962-96581	01	500V	1B	
UT54ACS280	5962-96582	01	500V	1B	9-bit parity generators/checkers
UT54ACTS280	5962-96583	01	500V	1B	
UT54ACS283	5962-96584	01	500V	1B	Adders 4-bit parity binary full
UT54ACS283E*	5962-96584	02, 03	2000V	2	
UT54ACTS283	5962-96585	01	500V	1B	
UT54ACS299E*	5962-06238	02, 03	500V	1B	Registers universal shift/storage
UT54ACS365	5962-96586	01	500V	1B	Buffers/line drivers hex with 3-state outputs
UT54ACTS365	5962-96587	01	500V	1B	

UT54ACS373	5962-96588	01	500V	1B	Latches octal transparent with 3-state outputs
UT54ACTS373	5962-96589	01	500V	1B	
UT54ACS374	5962-96590	01	500V	1B	FLIP-FLOPS octal D with 3-state outputs
UT54ACTS374	5962-96591	01	500V	1B	
UT54ACS540	5962-96592	01	500V	1B	Octal Buffers and Line Drivers with inverted 3-state outputs
UT54ACTS540	5962-96593	01	500V	1B	
UT54ACS541	5962-96594	01	500V	1B	Octal Buffers and Line Drivers with 3-state outputs
UT54ACTS541	5962-96595	01	500V	1B	
UT54ACTS541E*	5962-96595	02, 03	500V	1B	
UT54ACTS630	5962-06239	01	500V	1B	EDACs
UT54ACS899*	5962-06240	01	500V	1B	Transceivers latchable with parity generator/checker
UT54ACS4002	5962-96596	01	500V	1B	Logic dual 4-input NOR gates
UT54ACTS4002	5962-96597	01	500V	1B	
* 3.0V to 5.0V Supply Range					