

MARK-UP FOR DCR,  
S.T.  
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Pages 1 to 28

**INTEGRATED CIRCUITS, SILICON MONOLITHIC, CMOS**  
**ANALOGUE MULTIPLEXER/DEMULTIPLEXER**  
**(SINGLE 8-CHANNEL)**

**BASED ON TYPE 4051B**

**ESCC Detail Specification No. 9202/047**

<b>3</b> Issue <del>7</del>	<b>June</b> <del>April</del> 2004
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Characteristics	Symbols	MIL-STD-883 Test Method	Test Conditions Note 1	Limits		Units
				Min	Max	
Input Clamp Voltage 2, to V <sub>DD</sub> , Control Inputs	V <sub>IC2</sub>	-	V <sub>IN</sub> (Under Test)=6V R=30kΩ, V <sub>SS</sub> =Open All Other Pins Open Note 6	3	-	V
Input Capacitance, Control Inputs	C <sub>IN</sub>	3012	V <sub>IN</sub> (Not Under Test)=0V V <sub>DD</sub> =V <sub>SS</sub> =V <sub>EE</sub> =0V f = 100 kHz to 1 MHz Note 7	-	7.5	pF
Channel Capacitance, CHn	C <sub>CH</sub>	3012	V <sub>IN</sub> (Not Under Test)=0V V <sub>DD</sub> =V <sub>SS</sub> =V <sub>EE</sub> =0V f = 100 kHz to 1 MHz Note 7	-	7.5	pF
Channel Capacitance, COM	C <sub>COM</sub>	3012	V <sub>IN</sub> (Not Under Test)=0V V <sub>DD</sub> =V <sub>SS</sub> =V <sub>EE</sub> =0V f = 100 kHz to 1 MHz Note 7	-	7.5	pF
Propagation Delay Low to High <del>X</del> COM to CH0	t <sub>PLH</sub> <del>X</del>	3003	V <sub>IN</sub> (COM)=Pulse Generator V <sub>IN</sub> (Remaining Inputs)=Truth Table V <sub>IL</sub> =0V, V <sub>IH</sub> =5V, R <sub>L</sub> =200kΩ V <sub>DD</sub> =5V, V <sub>SS</sub> =V <sub>EE</sub> =0V Note 8	-	40	ns
Propagation Delay High to Low <del>X</del> COM to CH0	t <sub>PHL</sub> <del>X</del>	3003	V <sub>IN</sub> (COM)=Pulse Generator V <sub>IN</sub> (Remaining Inputs)=Truth Table V <sub>IL</sub> =0V, V <sub>IH</sub> =5V, R <sub>L</sub> =200kΩ V <sub>DD</sub> =5V, V <sub>SS</sub> =V <sub>EE</sub> =0V Note 8	-	40	ns
Propagation Delay Low to High 2, A to COM (Channel ON)	<del>t<sub>PLH2</sub></del> t <sub>PZH1</sub>	3003	V <sub>IN</sub> (A)=Pulse Generator V <sub>IN</sub> (Remaining Inputs)=Truth Table V <sub>IL</sub> =0V, V <sub>IH</sub> =5V, V <sub>IN</sub> (CH)=0V and 5V and Open R <sub>L</sub> =10kΩ V <sub>DD</sub> =5V, V <sub>SS</sub> =V <sub>EE</sub> =0V Note 8	-	670	ns

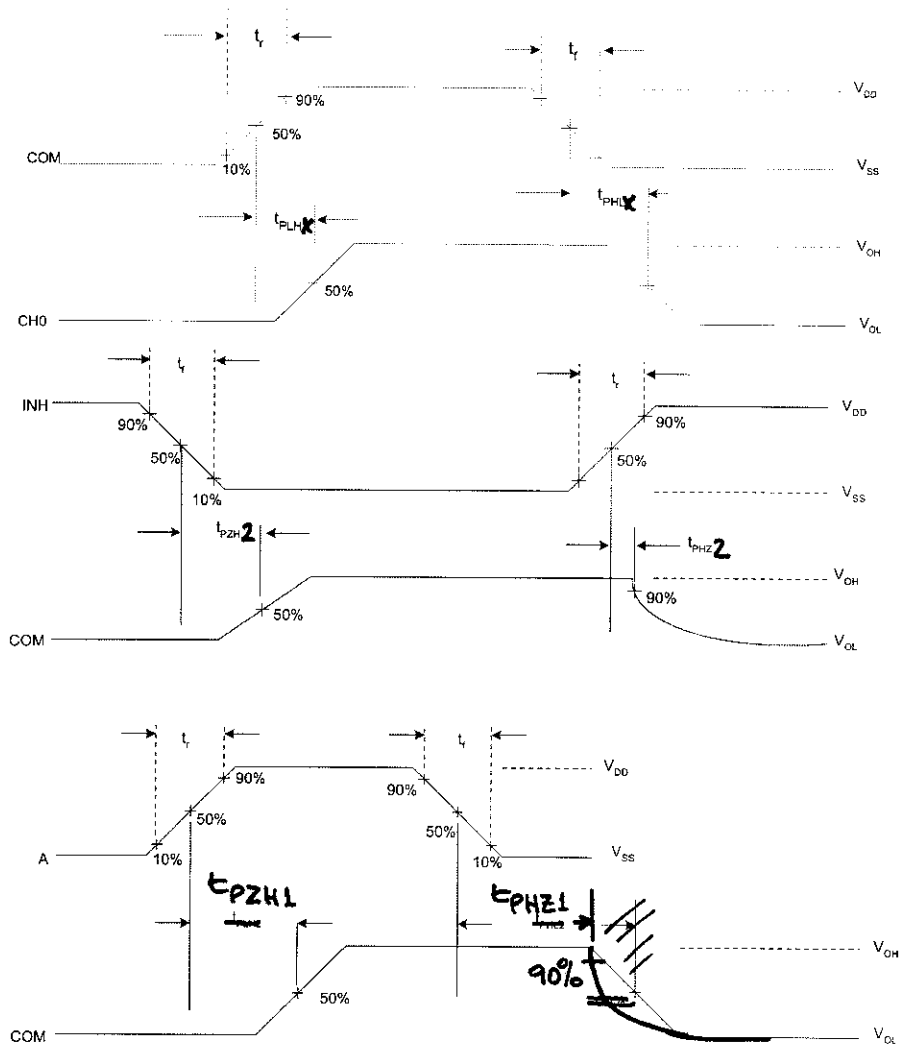
Output Enable Time High Impedance to High Output 1, A to COM

Characteristics	Symbols	MIL-STD-883 Test Method	Test Conditions Note 1	Limits		Units
				Min	Max	
<p><i>Output Disable Time High Output to High Impedance 1, A to COM</i></p> Propagation Delay High to Low 2, A to COM (Channel ON)	$t_{PHL2}$ $t_{PHZ1}$	3003	$V_{IN}(A)=$ Pulse Generator $V_{IN}$ (Remaining Inputs)=Truth Table $V_{IL}=0V, V_{IH}=5V,$ $V_{IN}(CH)=0V$ and $5V$ and Open $R_L=10k\Omega$ $300\Omega$ $V_{DD}=5V, V_{SS}=V_{EE}=0V$ Note 8	-	670	ns
Output Enable Time High Impedance to High Output 2, INH to COM	$t_{PZH2}$	3003	$V_{IN}(INH)=$ Pulse Generator $V_{IN}$ (Remaining Inputs)=Truth Table $V_{IL}=0V, V_{IH}=5V,$ $V_{IN}(CH)=5V, R_L=10k\Omega$ $V_{DD}=5V, V_{SS}=V_{EE}=0V$ Note 8	-	400	ns
Output Disable Time High Output to High Impedance 2, INH to COM	$t_{PHZ2}$	3003	$V_{IN}(INH)=$ Pulse Generator $V_{IN}$ (Remaining Inputs)=Truth Table $V_{IL}=0V, V_{IH}=5V,$ $V_{IN}(CH)=5V, R_L=300\Omega$ $V_{DD}=5V, V_{SS}=V_{EE}=0V$ Note 8	-	400	ns

2.3.2 High and Low Temperatures Electrical Measurements

The measurements shall be performed at  $T_{amb}=+125 (+0 -5) ^\circ C$  and  $T_{amb}=- 55(+5-0)^\circ C$ .

Characteristics	Symbols	MIL-STD-883 Test Method	Test Conditions Note 1	Limits		Units
				Min	Max	
Functional Test 1	-	3014	Verify Truth Table $V_{IL}=0V, V_{IH}=3V$ $V_{DD}=3V,$ $V_{SS}=V_{EE}=0V$ Note 2	-	-	-
Functional Test 2	-	3014	Verify Truth Table $V_{IL}=0V, V_{IH}=15V$ $V_{DD}=15V,$ $V_{SS}=V_{EE}=0V$ Note 2	-	-	-
Quiescent Current	$I_{DD}$	3005	$V_{IL}=0V, V_{IH}=15V$ $V_{DD}=15V,$ $V_{SS}=V_{EE}=0V$ Note 3 $T_{amb}=+125^\circ C$ $T_{amb}=- 55^\circ C$	-	15	$\mu A$
				-	0.5	



2.4

PARAMETER DRIFT VALUES

Unless otherwise specified, the measurements shall be performed at  $T_{amb} = +22 \pm 3^\circ C$ .

The test methods and test conditions shall be as per the corresponding test defined in Room Temperature Electrical Measurements.

The drift values ( $\Delta$ ) shall not be exceeded for each characteristic specified. The corresponding absolute limit values for each characteristic shall not be exceeded.