

5-Bit 2:1 Multiplexer

Product Preview

ELECTRICALLY TESTED PER:
10E558

The 10E558 contains five 2:1 multiplexers with differential outputs. The output data are controlled by the Select input (SEL).

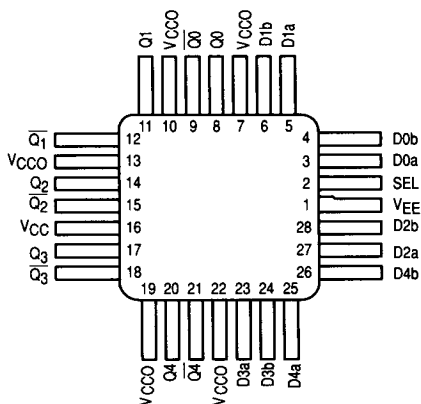
- 600 ps Max. D to Output
- 800 ps Max. SEL to Output
- Differential Outputs
- One V_{CCO} Pin Per Output Pair
- 75 kΩ Input Pulldown Resistors

PIN NAME

Pin	Function
D _{0a} - D _{4a}	Inputs Data a
D _{0b} - D _{4b}	Inputs Data b
SEL	Select Input
Q ₀ - Q ₄	True Outputs
$\overline{Q_0} - \overline{Q_4}$	Inverted Outputs

Function Table

SEL	Data
H	a
L	b



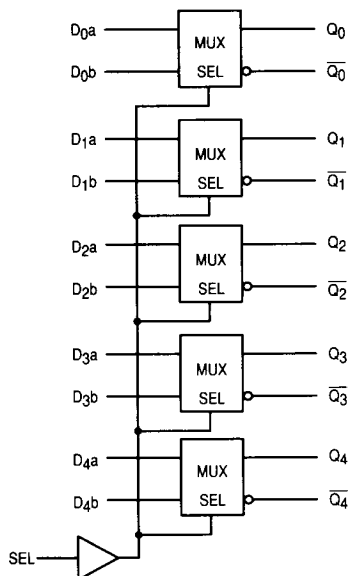
Military 10E558

**AVAILABLE AS**

- 1) JAN: N/A
2) SMD: N/A
3) 883: Planned
X = CASE OUTLINE AS FOLLOWS:

PACKAGE: NON-Compliant
QFP: X

LOGIC DIAGRAM



This document contains information on a product under development. Motorola reserves the right to change or discontinue this product without notice.

10E Series DC CHARACTERISTICS: $V_{EE} = -5.2 \text{ V} \pm 5\%$; $V_{CC} = V_{CCO} = \text{GND}$ ¹

Symbol	Parameter	Limits						Units
		+ 25° C		+ 125° C		– 55° C		
		Min	Max	Min	Max	Min	Max	
V _{OH}	Output HIGH Voltage	-980	-810	TBA		TBA		mV
V _{OL}	Output LOW Voltage	-1950	-1630	TBA		TBA		mV
V _{IH}	Input HIGH Voltage	-1130	-810	TBA		TBA		mV
V _{IL}	Input LOW Voltage	-1950	-1480	TBA		TBA		mV
I _{IL}	Input LOW Current	0.5		TBA		TBA		μA

1. 10E series circuits are designed to meet the dc specifications shown in the table, after thermal equilibrium has been established. The circuit is in a test socket or mounted on a printed circuit board and transverse air flow greater than 500 lfpm is maintained. Outputs are terminated through a 50 Ω resistor to -2.0 volts, except bus outputs where specified, are terminated into 25 Ω .

DC CHARACTERISTICS: $V_{EE} = V_{EE}(\text{min})$ to $V_{EE}(\text{max})$, $V_{CC} = V_{CCO} = \text{GND}$

Symbol	Parameter	Limits						Units	TEST CONDITION APPLIED:
		+ 25° C		+ 125° C		– 55° C			
		Min	Max	Min	Max	Min	Max		
I _{IH}	Input High Current							μA	
	D		200		200		200		
	SEL		150		150		150		
I _{EE}	Power Supply Current		40		40		40	mA	

AC CHARACTERISTICS: $V_{EE} = V_{EE}(\text{min})$ to $V_{EE}(\text{max})$, $V_{CC} = V_{CCO} = \text{GND}$

Symbol	Parameter	Limits						Units	TEST CONDITION APPLIED:
	Functional Parameters:	+ 25° C		+ 125° C		– 55° C			
		Min	Max	Min	Max	Min	Max		
tPLH tPHL	Propagation Delay to Output								
	D	225	550	225	550	225	550	ps	
	SEL	400	775	400	775	400	775	ps	
tSkew	Within-device Skew	60		60		60		ps	(Note 1)
t _r t _f	Rise/Fall Times 20 - 80%	275	650	275	650	275	650	ps	

1. Within-device skew is defined as identical transitions on similar paths through a device.