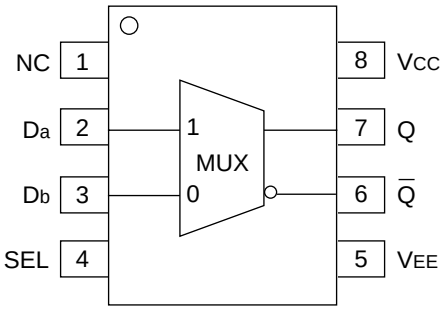
FEATURES

- **230ps propagation delay**
- **High bandwidth output transitions**
- **Internal 75KΩ input pull-down resistors**
- **Available in 8-pin SOIC package**

DESCRIPTION

The SY10/100EL58 are 2:1 multiplexers. These devices are functionally equivalent to the E158 devices, with higher performance capabilities. With propagation delays and output transition times significantly faster than the E158, the EL58 is ideally suited for those applications which require the ultimate in AC performance.

PIN CONFIGURATION/BLOCK DIAGRAM



SOIC
TOP VIEW

TRUTH TABLE

SEL	Data
H	a
L	b

PIN NAMES

Pin	Function
D_a, D_b	Data Inputs
Q	Data Outputs
SEL	Select Input

DC ELECTRICAL CHARACTERISTICS

V_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = GND

Symbol	Parameter	T_A = -40°C			T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I_{EE}	Power Supply Current													mA
	10EL	—	14	17	11	14	17	11	14	17	11	14	17	
	100EL	—	14	17	11	14	17	11	14	17	13	16	19	
V_{EE}	Power Supply Voltage													V
	10EL	–4.75	–5.2	–5.5	–4.75	–5.2	–5.5	–4.75	–5.2	–5.5	–4.75	–5.2	–5.5	
	100EL	–4.20	–4.5	–5.5	–4.20	–4.5	–5.5	–4.20	–4.5	–5.5	–4.20	–4.5	–5.5	
I_{IH}	Input HIGH Current	—	—	150	—	—	150	—	—	150	—	—	150	µA

AC ELECTRICAL CHARACTERISTICS

V_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = GND

Symbol	Parameter	T_A = -40°C			T_A = 0°C			T_A = +25°C			T_A = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
t_{PLH} t_{PHL}	Propagation Delay to Output D	60 90	220 250	380 410	110 140	220 250	330 360	120 150	230 260	340 370	140 170	250 280	360 390	ps
t_r t_f	Output Rise/Fall Times Q (20% to 80%)	100	225	350	100	225	350	100	225	350	100	225	350	ps

PRODUCT ORDERING CODE

Ordering Code	Package Type	Operating Range	Marking Code
SY10EL58ZC	Z8-1	Commercial	HEL58
SY10EL58ZCTR*	Z8-1	Commercial	HEL58
SY100EL58ZC	Z8-1	Commercial	XEL58
SY100EL58ZCTR*	Z8-1	Commercial	XEL58

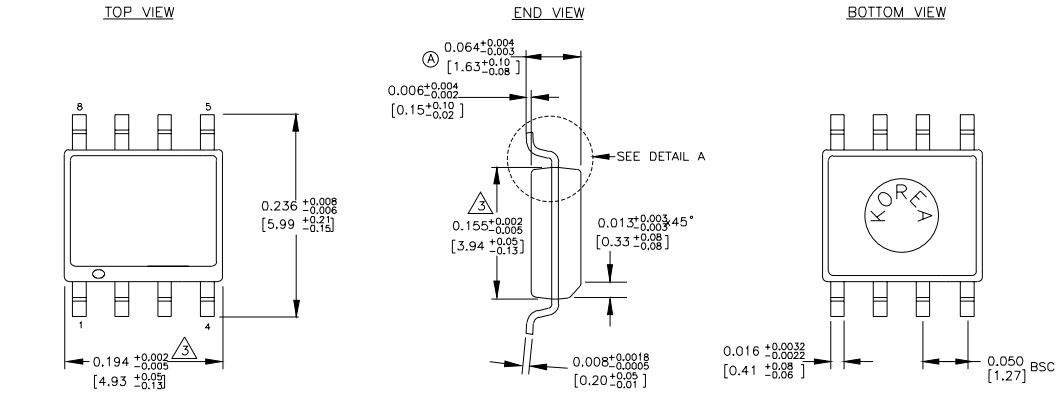
*Tape and Reel

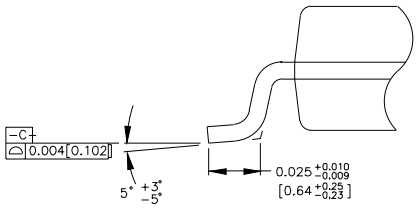
Ordering Code	Package Type	Operating Range	Marking Code
SY10EL58ZI[(1)]	Z8-1	Industrial	HEL58
SY10EL58ZITR*[(1)]	Z8-1	Industrial	HEL58
SY100EL58ZI[(1)]	Z8-1	Industrial	XEL58
SY100EL58ZITR*[(1)]	Z8-1	Industrial	XEL58

*Tape and Reel

Note 1. Recommended for new designs.

8 LEAD SOIC .150" WIDE (Z8-1)





NOTES:
1. DIMENSIONS ARE IN INCHES[MM].
2. CONTROLLING DIMENSION: INCHES.
3. DIMENSION DOES NOT INCLUDE MOLD FLASH OR PROTRUSIONS, EITHER OF WHICH SHALL NOT EXCEED 0.006[0.152] PER SIDE.

Rev. 03

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