

ABSOLUTE MAXIMUM RATINGS⁽¹⁾

Symbol	Parameter	Value	Unit
V _{CC}	Power Supply Voltage	−0.5 to +7.0	V
V _I	PECL Input Voltage	0V to V _{CC} +0.5	V
V _O	Voltage Applied to Output at HIGH State	−0.5 to +5.5	V
I _O	Current Applied to Output at LOW State	Twice the Rated I _{OL}	mA
T _{store}	Storage Temperature	−65 to +150	°C
T _A	Operating Temperature	−40 to +85	°C

TRUTH TABLE

D	$\bar{D}$	Q
L	H	L
H	L	H
Open	Open	L

Note:

1. Permanent device damage may occur if ABSOLUTE MAXIMUM RATINGS are exceeded. This is a stress rating only and functional operation is not implied at conditions other than those detailed in the operational sections of this data sheet. Exposure to ABSOLUTE MAXIMUM RATING conditions for extended periods may affect device reliability.

DC ELECTRICAL CHARACTERISTICS⁽¹⁾

VCC = VCC (Min.) to VCC (Max.)

Symbol	Parameter	T _A = -40°C		T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
I _{CC}	Power Supply Current	—	30	—	30	—	30	—	30	mA	—

Note:

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|------------------------------------|---------------------------|------------------|------------------|
| 1. Parametric values specified at: | 5 volt Power Supply Range | 100ELT23 Series: | +4.5V to +5.5V. |
| | | 10ELT23 Series | +4.75V to +5.5V. |

AC ELECTRICAL CHARACTERISTICS⁽¹⁾

VCC = VCC (Min.) to VCC (Max.)

Symbol	Parameter	T _A = -40°C		T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
t _{PLH} t _{PHL}	Propagation Delay D to Output Q	2.5	3.5	2.5	3.5	2.5	3.5	2.5	3.5	ns	C _L = 50pF
tskpp	Part-to-Part Skew ^(2,5)	—	0.5	—	0.5	—	0.5	—	0.5	ns	C _L = 50pF
tskew++	Within-Device Skew ^(3,5)	—	0.3	—	0.3	—	0.3	—	0.3	ns	C _L = 50pF
tskew--	Within-Device Skew ^(4,5)	—	0.3	—	0.3	—	0.3	—	0.3	ns	C _L = 50pF
t _r t _f	Output Rise/Fall Time 1.0V to 2.0V	—	1.5	—	1.5	—	1.5	—	1.5	ns	C _L = 50pF
f _{MAX}	Maximum Input Frequency ⁽⁵⁾	160	—	160	—	160	—	160	—	MHz	C _L = 50pF

Notes:

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|--|---------------------------|------------------|------------------|
| 1. Parametric values specified at: | 5 volt Power Supply Range | 100ELT23 Series: | +4.5V to +5.5V. |
| | | 10ELT23 Series | +4.75V to +5.5V. |
| 2. Device-to-Device Skew considering HIGH-to-HIGH transitions at common V _{CC} level. | | | |
| 3. Within-Device Skew considering HIGH-to-HIGH transitions at common V _{CC} level. | | | |
| 4. Within-Device Skew considering LOW-to-LOW transitions at common V _{CC} level. | | | |
| 5. These parameters are guaranteed but not tested. | | | |

VCC = VCC (Min.) to VCC (Max.)

Symbol	Parameter	T _A = -40°C		T _A = 0°C		T _A = +25°C		T _A = +85°C		Unit	Condition
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
V _{OH}	Output HIGH Voltage	2.5 2.0	— —	2.5 2.0	— —	2.5 2.0	— —	2.5 2.0	— —	V V	I _{OH} = -3.0mA I _{OH} = -15mA
V _{OL}	Output LOW Voltage	—	0.5	—	0.5	—	0.5	—	0.5	V	I _{OL} = 24mA
I _{OS}	Output Short Circuit Current	-80	-200	-80	-200	-80	-200	-80	-200	mA	V _{OUT} = 0V

1. Parametric values specified at:	5 volt Power Supply Range	100ELT23 Series:	+4.5V to +5.5V.
		10ELT23 Series	+4.75V to +5.5V.

VCC = VCC (Min.) to VCC (Max.)

Symbol	Parameter	TA = -40°C			TA = 0°C			TA = +25°C			TA = +85°C			Unit
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
I _{IH}	Input HIGH Current	—	—	150	—	—	150	—	—	150	—	—	150	μA
I _{IL}	Input HIGH Current	0.5	—	—	0.5	—	—	0.5	—	—	0.5	—	—	μA
V _{CMR}	Common Mode Range	2.2	—	V _{CC}	2.2	—	V _{CC}	2.2	—	V _{CC}	2.2	—	V _{CC}	V
V _{PP}	Minimum Peak-to-Peak Input ⁽²⁾	200	—	—	200	—	—	200	—	—	200	—	—	mV
V _{IH}	Input HIGH Voltage ⁽³⁾													mV
	10ELT	3770	—	4110	3830	—	4160	3870	—	4190	3940	—	4280	
	100ELT	3835	—	4120	3835	—	4120	3835	—	4120	3835	—	4120	
V _{IL}	Input LOW Voltage ⁽³⁾													mV
	10ELT	3050	—	3500	3050	—	3520	3050	—	3520	3050	—	3555	
	100ELT	3190	—	3525	3190	—	3525	3190	—	3525	3190	—	3525	

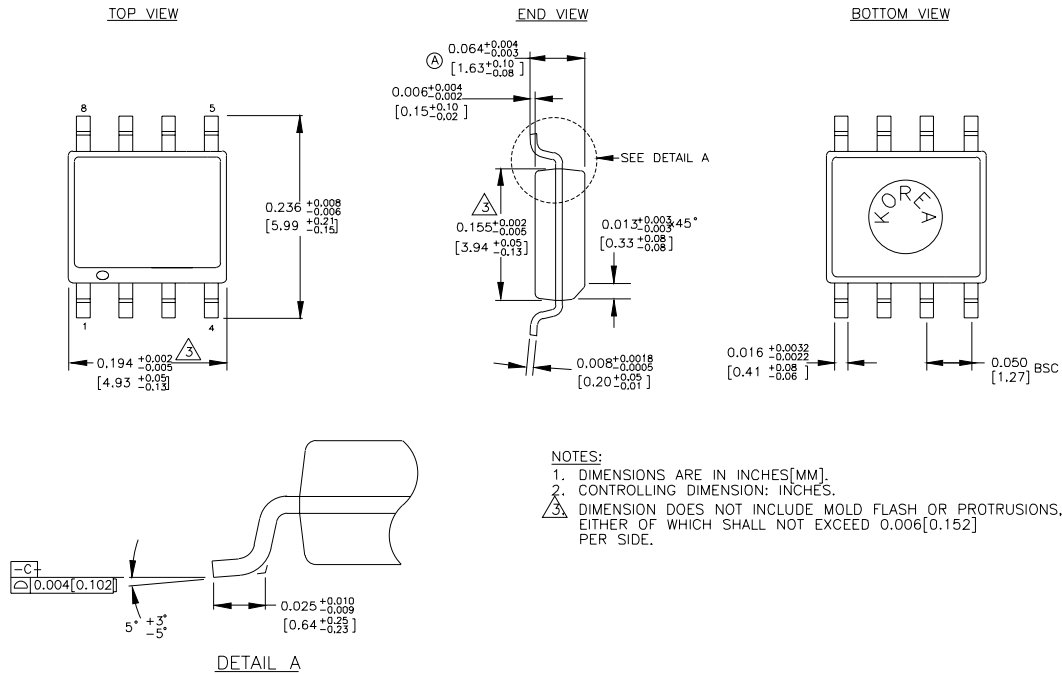
1. Parametric values specified at: 5 volt Power Supply Range 100ELT23 Series: +4.5V to +5.5V.
10ELT23 Series +4.75V to +5.5V.
2. 200mV input guarantees full logic at output.
3. These values are for $V_{CC} = 5.0V$. Level Specifications will vary 1:1 V_{CC} .

PRODUCT ORDERING CODE

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10ELT23ZC	Z8-1	Commercial	HEL23	Standard
SY10ELT23ZCTR ⁽¹⁾	Z8-1	Commercial	HEL23	Standard
SY100ELT23ZC	Z8-1	Commercial	XEL23	Standard
SY100ELT23ZCTR ⁽¹⁾	Z8-1	Commercial	XEL23	Standard
SY10ELT23ZI	Z8-1	Industrial	HEL23	Standard
SY10ELT23ZITR ⁽¹⁾	Z8-1	Industrial	HEL23	Standard
SY100ELT23ZI	Z8-1	Industrial	XEL23	Standard
SY100ELT23ZITR ⁽¹⁾	Z8-1	Industrial	XEL23	Standard
SY10ELT23ZG ^(2,3)	Z8-1	Industrial	HEL23	Pb-Free NiPdAu
SY10ELT23ZGTR ^(1,2,3)	Z8-1	Industrial	HEL23	Pb-Free NiPdAu
SY100ELT23ZG ^(2,3)	Z8-1	Industrial	XEL23	Pb-Free NiPdAu
SY100ELT23ZGTR ^(1,2,3)	Z8-1	Industrial	XEL23	Pb-Free NiPdAu

Notes:

1. Tape and Reel.
2. Recommended for new designs.
3. Pb-Free version.

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

Rev. 03

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