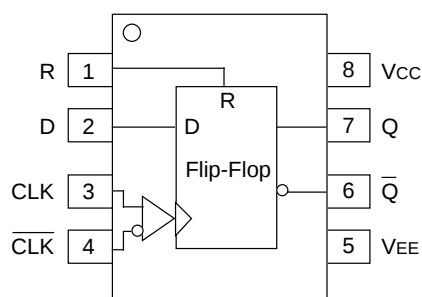


PACKAGE/ORDERING INFORMATION



8-Pin SOIC (Z8-1)

Ordering Information⁽¹⁾

Part Number	Package Type	Operating Range	Package Marking	Lead Finish
SY10EL51ZC	Z8-1	Commercial	HEL51	Sn-Pb
SY10EL51ZCTR ⁽²⁾	Z8-1	Commercial	HEL51	Sn-Pb
SY100EL51ZC	Z8-1	Commercial	XEL51	Sn-Pb
SY100EL51ZCTR ⁽²⁾	Z8-1	Commercial	XEL51	Sn-Pb
SY10EL51ZI	Z8-1	Industrial	HEL51	Sn-Pb
SY10EL51ZITR ⁽²⁾	Z8-1	Industrial	HEL51	Sn-Pb
SY100EL51ZI	Z8-1	Industrial	XEL51	Sn-Pb
SY100EL51ZITR ⁽²⁾	Z8-1	Industrial	XEL51	Sn-Pb
SY10EL51ZG ⁽³⁾	Z8-1	Industrial	HEL51 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY10EL51ZGTR ^(2, 3)	Z8-1	Industrial	HEL51 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL51ZG ⁽³⁾	Z8-1	Industrial	XEL51 with Pb-Free bar-line indicator	Pb-Free NiPdAu
SY100EL51ZGTR ^(2, 3)	Z8-1	Industrial	XEL51 with Pb-Free bar-line indicator	Pb-Free NiPdAu

Notes:

1. Contact factory for die availability. Dice are guaranteed at $T_A = 25^\circ\text{C}$, DC Electricals only.
2. Tape and Reel.
3. Pb-Free package is recommended for new designs.

DC ELECTRICAL CHARACTERISTICSV_{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	—	24	29	19	24	29	19	24	29	19	24	29	
	100EL	—	24	29	19	24	29	19	24	29	19	24	36	
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

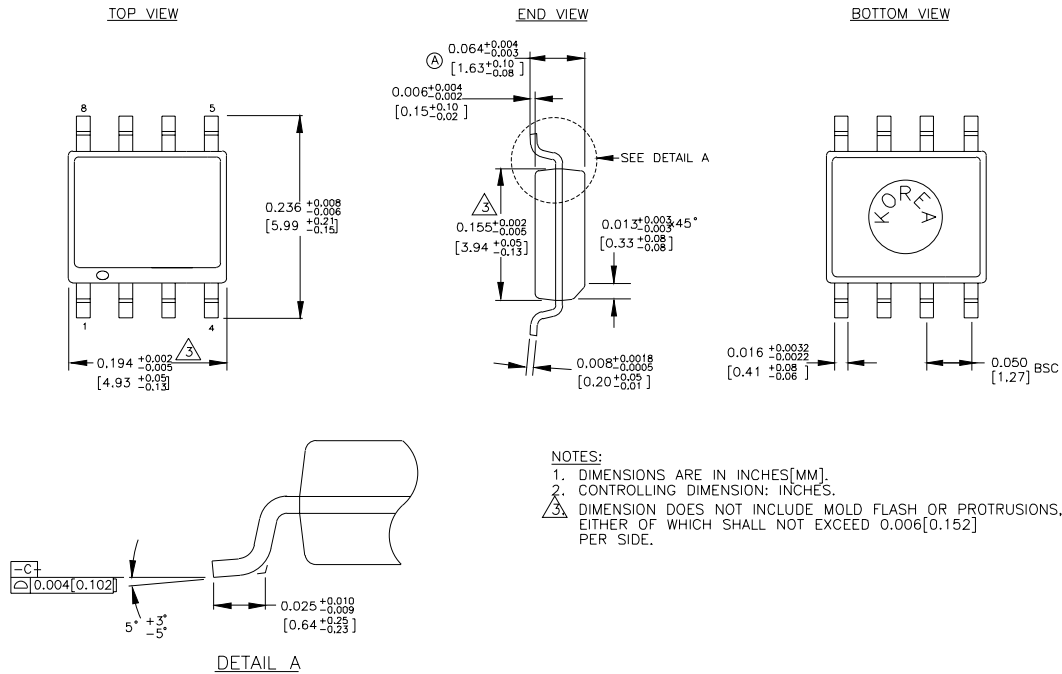
AC ELECTRICAL CHARACTERISTICSV_{EE} = V_{EE} (Min.) to V_{EE} (Max.); V_{CC} = GND

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.	
f _{MAX}	Maximum Toggle Frequency	1.8	2.8	—	2.2	2.8	—	2.2	2.8	—	2.2	2.8	—	GHz
t _{PD}	Propagation Delay to Output CLK R	325	465	605	375	465	555	385	475	565	440	530	620	ps
		305	455	605	355	455	555	355	465	565	410	510	620	
t _S	Set-up Time	150	0	—	150	0	—	150	0	—	150	0	—	ps
t _H	Hold Time	250	100	—	250	100	—	250	100	—	250	100	—	ps
t _{RR}	Reset Recovery	400	200	—	400	200	—	400	200	—	400	200	—	ps
t _{PW}	Minimum Pulse Width CLK, Reset	400	—	—	400	—	—	400	—	—	400	—	—	ps
V _{PP}	Minimum Input Swing ⁽¹⁾	150	—	—	150	—	—	150	—	—	150	—	—	mV
V _{CMR}	Common Mode Range ⁽²⁾	(2)	—	-0.4	(2)	—	-0.4	(2)	—	-0.4	(2)	—	-0.4	V
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

NOTES:

1. Minimum input swing for which AC parameters are guaranteed.
2. The CMR range is referenced to the most positive side of the differential input signal. Normal operation is obtained if the HIGH level falls within the specified range and the peak-to-peak voltage lies between V_{PP} min. and 1V. The lower end of the CMR range is dependent on V_{EE} and is equal to V_{EE} + 3.0V.

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



Rev. 03

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