

ECLinPS Family Specifications

Absolute Maximum Ratings

Beyond which device life maybe impaired.¹

Characteristic	Symbol	Rating	Unit
Power Supply ($V_{CC} = 0V$)	V_{EE}	– 8 to 0	Vdc
Input Voltage ($V_{CC} = 0V$)	V_I	0 to – 6V	Vdc
Output Current — Continuous — Surge	I_{out}	50 100	mA
Operating Temperature Range 10E Series 100E Series	T_A	0 to + 85 0 to + 85	°C
Operating Range ²	V_{EE}	– 5.7 to – 4.2	V

1. Unless specified otherwise on individual data sheet.

2. Parametric values specified at: 100E series: – 4.2V to – 5.46V
10E series: – 4.94V to – 5.46V

10E Series DC Characteristics

$V_{EE} = -5.2V \pm 5\%$; $V_{CC} = V_{CCO} = GND$ ¹

Symbol	Characteristic	0°C		25°C		75°C		85°C		Unit
		Min	Max	Min	Max	Min	Max	Min	Max	
V_{OH}	Output HIGH Voltage	–1020	– 840	– 980	– 810	– 920	–735	– 910	–720	mV
V_{OL}	Output LOW Voltage	–1950	–1630	–1950	–1630	–1950	–1600	–1950	–1595	mV
V_{IH}	Input HIGH Voltage	–1170	– 840	–1130	– 810	–1070	–735	–1060	–720	mV
V_{IL}	Input LOW Voltage	–1950	–1480	–1950	–1480	–1950	–1450	–1950	–1445	mV
I_{IL}	Input LOW Current	0.5		0.5		0.3		0.3		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 50Ω resistor to –2.0 volts, except bus outputs which, where specified, are terminated into 25Ω.

100E Series DC Characteristics

$V_{EE} = -4.2V$ to – 5.46V; $V_{CC} = V_{CCO} = GND$; $T_A = 0^\circ C$ to + 85°C

Symbol	Characteristic	Min	Typ	Max	Unit	Conditions	
V _{OH}	Output HIGH Voltage	–1025	– 955	– 880	mV	V _{IN} = V _{IH} (max)	Loading with 50Ω to – 2.0V
V _{OL}	Output LOW Voltage	–1810	–1705	–1620	mV	or V _{IL} (min)	
V _{OHA}	Output HIGH Voltage	–1035			mV	V _{IN} = V _{IH} (min)	
V _{OLA}	Output LOW Voltage			–1610	mV	or V _{IL} (max)	
V _{IH}	Input HIGH Voltage	–1165		– 880	mV	Guaranteed HIGH Signal for All Inputs	
V _{IL}	Input LOW Voltage	–1810		–1475	mV	Guaranteed LOW Signal for All Inputs	
I _{IL}	Input LOW Current	0.5			μA	V _{IN} = V _{IL} (min)	

This table replaces the three tables at different supply voltages in the previous edition and in ECL 100K literature. The same DC parametric values at $V_{EE} = -4.5V$ now apply across the full V_{EE} range of – 4.2 to – 5.46V.