GF55 LPE: GMII

LPE Libraries

Name	Form Factor	Silicon Proven
RGO_GF55_25V33_LPE_30C_GMII	Staggered	Yes
RGO_GF55_25V33_LPE_50C_GMII	Inline	Yes

Summary

The GMII library provides the driver / receiver cell for Gigabit Media Independent Interface signaling. It is designed to interface Ethernet PHY to network switch ASICs. This library is provided as a supplement to the 55nm GPIO libraries provided by Aragio Solutions.

GMII Specification Compliant:

IEEE 802.3-2005

ESD Protection:

- JEDEC compliant
  - 2KV ESD Human Body Model (HBM)
  - 200V ESD Machine Model (MM)
  - 500V ESD Charge Device Model (CDM)

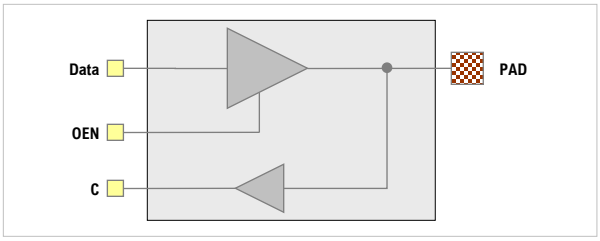
Latch-up Immunity:

- JEDEC compliant
  - Tested to I-Test criteria of ± 100mA @ 125°C

MIx_BI_001_33V_NC

Description

Bi-directional GMII driver



Characterization Corners

Nominal VDD	Model	VDD	DVDD[1]	Temperature
1.2	FF	+10%	+10%	-40°C
	FFF [2]	+10%	+10%	125°C
	FFF [2]	+10%	+10%	150°C
	TT	nominal	nominal	25°C
	SS	-10%	-10%	-40°C
	SS	-10%	-10%	125°C
	SS	-10%	-10%	150°C
1.0	FF	+10%	+10%	-40°C
	FFF [2]	+10%	+10%	125°C
	FFF [2]	+10%	+10%	150°C
	TT	nominal	nominal	25°C
	SS	-10%	-10%	-40°C
	SS	-10%	-10%	125°C
	SS	-10%	-10%	150°C
0.9	FF	+10%	+10%	-40°C
	FFF [2]	+10%	+10%	125°C
	FFF [2]	+10%	+10%	150°C
	TT	nominal	nominal	25°C
	SS	-10%	-10%	-40°C
	SS	-10%	-10%	125°C
	SS	-10%	-10%	150°C

[1] DVDD = 3.3V
[2] The FFF requirement is for leakage only. Aragio cannot guarantee that the AC/DC specifications will be met for the FFF model corner

Recommended operating conditions

	Description	Min	Nom	Max	Units
V_{VDD}	Core supply voltage	0.9	1.0	1.1	V
		1.08	1.2	1..32	V
T_J	Junction temperature	-40	25	+125	°C
V_{PAD}	Voltage at IO	0		V_{DVDD}	V
V_{DVDD}	I/O supply voltage	2.97	3.3	3.63	V
V_{IH}	Input logic high	1.7	-	-	V
V_{IL}	Input logic low	-	-	0.9	V
V_{IL_AC}	Input high voltage, AC	1.9	-	-	V
V_{IH_AC}	Input low voltage, AC	-	-	0.7	V
V_{OH}	Output logic high voltage	2.1	-	3.6	V
V_{OL}	Output logic low voltage	0	-	0.5	V
F	Clock frequency / accuracy	125 - 100ppm		125 + 100ppm	MHz

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