

sg13g2_io_slow_1p35V_3p0V_125C Library

Cell Groups
INOUTx
INPUT
SG13G2_IOPADIOVDD
SG13G2_IOPADIOVSS
SG13G2_IOPADVDD
SG13G2_IOPADVSS
TRI_OUTx

INOUTx



*sg13g2_io_slow_1p35V_3p0V_125C Cell Library: Process
sg13g2_io_slow_1p35V_3p0V_125C, Voltage 1.35, Temp
125.00*

Truth Table

INPUT			OUTPUT	
c2p	c2p_en	pad	pad	p2c
-	0	0	-	0
-	0	1	-	1
0	1	-	0	0
1	1	-	1	1

Footprint

Cell Name	Area
sg13g2_IOPadInOut16mA	14400.00000
sg13g2_IOPadInOut30mA	14400.00000
sg13g2_IOPadInOut4mA	14400.00000
sg13g2_IOPadOut16mA	14400.00000
sg13g2_IOPadOut30mA	14400.00000
sg13g2_IOPadOut4mA	14400.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)			Max Cap(pf)	
	c2p	c2p_en	pad	p2c	pad
sg13g2_IOPadInOut16mA	0.02663	0.02500	0.27165	0.73460	2.12219
sg13g2_IOPadInOut30mA	0.02663	0.02500	0.36639	0.73413	0.45481
sg13g2_IOPadInOut4mA	0.02663	0.02499	0.19051	0.73681	0.63516
sg13g2_IOPadOut16mA	0.03900	0.00000	0.00000	0.00000	2.06464
sg13g2_IOPadOut30mA	0.03900	0.00000	0.00000	0.00000	2.56963
sg13g2_IOPadOut4mA	0.03900	0.00000	0.00000	0.00000	0.66125

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadInOut16mA	398.07800	17156.30000	17607.90000
sg13g2_IOPadInOut30mA	355.71500	19147.00000	19147.00000
sg13g2_IOPadInOut4mA	383.93600	15393.30000	17608.40000
sg13g2_IOPadOut16mA	1041.68000	7239.34000	7239.34000
sg13g2_IOPadOut30mA	1485.88000	9520.33000	9520.33000
sg13g2_IOPadOut4mA	738.34400	5360.58000	6177.35000

Delay Information

Delay(ns) to p2c rising :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	pad->p2c (RR)	0.12000	0.02400	0.11238	0.60000	0.14400	0.21198	3.50000	0.24000	0.28433
sg13g2_IOPadInOut30mA	pad->p2c (RR)	0.12000	0.02400	0.11223	0.60000	0.14400	0.21209	3.50000	0.24000	0.28451
sg13g2_IOPadInOut4mA	pad->p2c (RR)	0.12000	0.02400	0.11233	0.60000	0.14400	0.21195	3.50000	0.24000	0.28444

Delay(ns) to p2c falling :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	pad->p2c (FF)	0.12000	0.02400	0.40027	0.60000	0.14400	0.71909	3.50000	0.24000	2.21645
sg13g2_IOPadInOut30mA	pad->p2c (FF)	0.12000	0.02400	0.40032	0.60000	0.14400	0.71889	3.50000	0.24000	2.21747
sg13g2_IOPadInOut4mA	pad->p2c (FF)	0.12000	0.02400	0.40055	0.60000	0.14400	0.71917	3.50000	0.24000	2.21648

Delay(ns) to pad rising :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	c2p->pad (RR)	0.02000	1.00000	2.21678	0.33000	4.00000	2.88309	2.50000	10.00000	3.95578
	c2p_en->pad (FR)	0.02000	1.00000	1.56677	0.33000	4.00000	1.63499	2.50000	10.00000	1.81960
	c2p_en->pad (RR)	0.02000	1.00000	2.20115	0.33000	4.00000	2.88342	2.50000	10.00000	3.99464
sg13g2_IOPadInOut30mA	c2p->pad (RR)	0.02000	1.00000	2.50015	0.33000	4.00000	3.06781	2.50000	10.00000	3.81314
	c2p_en->pad (FR)	0.02000	1.00000	1.83824	0.33000	4.00000	1.89863	2.50000	10.00000	2.08387
	c2p_en->pad (RR)	0.02000	1.00000	2.45662	0.33000	4.00000	3.04905	2.50000	10.00000	3.81886
sg13g2_IOPadInOut4mA	c2p->pad (RR)	0.02000	1.00000	2.27181	0.33000	4.00000	4.31182	2.50000	10.00000	8.34096
	c2p_en->pad (FR)	0.02000	1.00000	1.30357	0.33000	4.00000	1.36508	2.50000	10.00000	1.55508
	c2p_en->pad (RR)	0.02000	1.00000	2.27714	0.33000	4.00000	4.37116	2.50000	10.00000	8.51980
sg13g2_IOPadOut16mA	c2p->pad (RR)	0.02000	1.00000	2.16764	0.33000	9.00000	3.78039	2.50000	15.00000	5.61349
sg13g2_IOPadOut30mA	c2p->pad (RR)	0.02000	2.00000	2.66791	0.33000	18.00000	4.59447	2.50000	30.00000	6.51871
sg13g2_IOPadOut4mA	c2p->pad (RR)	0.02000	1.00000	2.20736	0.33000	4.00000	4.32425	2.50000	10.00000	9.14272

Delay(ns) to pad falling :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	c2p->pad (FF)	0.02000	1.00000	1.63567	0.33000	4.00000	2.22564	2.50000	10.00000	3.47863
	c2p_en->pad (FF)	0.02000	1.00000	1.58400	0.33000	4.00000	1.66160	2.50000	10.00000	1.93919
	c2p_en->pad (RF)	0.02000	1.00000	1.38411	0.33000	4.00000	2.00943	2.50000	10.00000	3.05902
sg13g2_IOPadInOut30mA	c2p->pad (FF)	0.02000	1.00000	2.05482	0.33000	4.00000	2.47992	2.50000	10.00000	3.35301
	c2p_en->pad (FF)	0.02000	1.00000	2.46431	0.33000	4.00000	2.54142	2.50000	10.00000	2.81655
	c2p_en->pad (RF)	0.02000	1.00000	1.48037	0.33000	4.00000	1.96829	2.50000	10.00000	2.63140
sg13g2_IOPadInOut4mA	c2p->pad (FF)	0.02000	1.00000	1.73858	0.33000	4.00000	3.78511	2.50000	10.00000	8.05742
	c2p_en->pad (FF)	0.02000	1.00000	0.86295	0.33000	4.00000	0.93969	2.50000	10.00000	1.21270
	c2p_en->pad (RF)	0.02000	1.00000	1.72816	0.33000	4.00000	3.81526	2.50000	10.00000	7.93334
sg13g2_IOPadOut16mA	c2p->pad (FF)	0.02000	1.00000	1.56417	0.33000	9.00000	2.92209	2.50000	15.00000	4.03135
sg13g2_IOPadOut30mA	c2p->pad (FF)	0.02000	2.00000	2.12227	0.33000	18.00000	3.64733	2.50000	30.00000	4.78893
sg13g2_IOPadOut4mA	c2p->pad (FF)	0.02000	1.00000	1.63618	0.33000	4.00000	3.65919	2.50000	10.00000	7.76791

Power Information

Internal switching power(pJ) to p2c rising :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	pad	0.12000	0.02400	-0.55571	0.60000	0.14400	-0.55613	3.50000	0.24000	-0.55622
	pad	0.12000	0.02400	0.00783	0.60000	0.14400	0.00603	3.50000	0.24000	0.00540
sg13g2_IOPadInOut30mA	pad	0.12000	0.02400	-1.05869	0.60000	0.14400	-1.06335	3.50000	0.24000	-1.05928
	pad	0.12000	0.02400	0.00769	0.60000	0.14400	0.00612	3.50000	0.24000	0.00566
sg13g2_IOPadInOut4mA	pad	0.12000	0.02400	-0.13922	0.60000	0.14400	-0.13970	3.50000	0.24000	-0.13907
	pad	0.12000	0.02400	0.00784	0.60000	0.14400	0.00589	3.50000	0.24000	0.00749

Internal switching power(pJ) to p2c falling :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	pad	0.12000	0.02400	0.55715	0.60000	0.14400	0.55861	3.50000	0.24000	0.55622
	pad	0.12000	0.02400	0.06249	0.60000	0.14400	0.05821	3.50000	0.24000	0.06016
sg13g2_IOPadInOut30mA	pad	0.12000	0.02400	1.06111	0.60000	0.14400	1.06335	3.50000	0.24000	1.05928
	pad	0.12000	0.02400	0.06250	0.60000	0.14400	0.05820	3.50000	0.24000	0.05977
sg13g2_IOPadInOut4mA	pad	0.12000	0.02400	0.13981	0.60000	0.14400	0.13975	3.50000	0.24000	0.13907
	pad	0.12000	0.02400	0.06258	0.60000	0.14400	0.05821	3.50000	0.24000	0.06012

Internal switching power(pJ) to pad rising :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	c2p	0.02000	1.00000	5.15034	0.33000	4.00000	5.04639	2.50000	10.00000	4.83744
	c2p	0.02000	1.00000	1.86475	0.33000	4.00000	7.26271	2.50000	10.00000	17.17190
	c2p_en	0.02000	1.00000	4.78062	0.33000	4.00000	4.91871	2.50000	10.00000	5.41014
	c2p_en	0.02000	1.00000	1.83120	0.33000	4.00000	7.25336	2.50000	10.00000	17.10610
sg13g2_IOPadInOut30mA	c2p	0.02000	1.00000	8.11869	0.33000	4.00000	7.83213	2.50000	10.00000	7.63047
	c2p	0.02000	1.00000	1.85967	0.33000	4.00000	7.26554	2.50000	10.00000	11.87060
	c2p_en	0.02000	1.00000	7.21427	0.33000	4.00000	7.21002	2.50000	10.00000	7.32363
	c2p_en	0.02000	1.00000	1.82767	0.33000	4.00000	7.24285	2.50000	10.00000	11.84780
sg13g2_IOPadInOut4mA	c2p	0.02000	1.00000	2.85209	0.33000	4.00000	2.78796	2.50000	10.00000	2.61450
	c2p	0.02000	1.00000	1.86799	0.33000	4.00000	7.30115	2.50000	10.00000	18.30930
	c2p_en	0.02000	1.00000	2.69481	0.33000	4.00000	2.99493	2.50000	10.00000	3.50976
	c2p_en	0.02000	1.00000	1.83190	0.33000	4.00000	7.27584	2.50000	10.00000	18.28620
sg13g2_IOPadOut16mA	c2p	0.02000	1.00000	4.95659	0.33000	9.00000	4.82775	2.50000	15.00000	4.75200
	c2p	0.02000	1.00000	-0.01145	0.33000	9.00000	-0.00079	2.50000	15.00000	0.14242
sg13g2_IOPadOut30mA	c2p	0.02000	2.00000	7.86985	0.33000	18.00000	7.51998	2.50000	30.00000	7.38687
	c2p	0.02000	2.00000	-0.01145	0.33000	18.00000	-0.00082	2.50000	30.00000	0.14239
sg13g2_IOPadOut4mA	c2p	0.02000	1.00000	2.56939	0.33000	4.00000	2.50011	2.50000	10.00000	2.47593
	c2p	0.02000	1.00000	-0.01145	0.33000	4.00000	-0.00080	2.50000	10.00000	0.14249

Internal switching power(pJ) to pad falling :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadInOut16mA	c2p	0.02000	1.00000	10.47290	0.33000	4.00000	8.14068	2.50000	10.00000	6.27296
	c2p	0.02000	1.00000	0.20674	0.33000	4.00000	0.21090	2.50000	10.00000	0.35187
	c2p_en	0.02000	1.00000	1.97880	0.33000	4.00000	1.97361	2.50000	10.00000	1.97114
	c2p_en	0.02000	1.00000	0.10540	0.33000	4.00000	0.10912	2.50000	10.00000	0.19035
sg13g2_IOPadInOut30mA	c2p	0.02000	1.00000	41.50160	0.33000	4.00000	35.53430	2.50000	10.00000	27.87700
	c2p	0.02000	1.00000	0.20671	0.33000	4.00000	0.21087	2.50000	10.00000	0.35014
	c2p_en	0.02000	1.00000	3.33233	0.33000	4.00000	3.33698	2.50000	10.00000	3.32419
	c2p_en	0.02000	1.00000	0.10532	0.33000	4.00000	0.10942	2.50000	10.00000	0.18538
sg13g2_IOPadInOut4mA	c2p	0.02000	1.00000	1.42701	0.33000	4.00000	1.41995	2.50000	10.00000	1.41495
	c2p	0.02000	1.00000	0.20648	0.33000	4.00000	0.21225	2.50000	10.00000	0.35696
	c2p_en	0.02000	1.00000	0.83144	0.33000	4.00000	0.82958	2.50000	10.00000	0.83027
	c2p_en	0.02000	1.00000	0.10523	0.33000	4.00000	0.11021	2.50000	10.00000	0.19660
sg13g2_IOPadOut16mA	c2p	0.02000	1.00000	11.36590	0.33000	9.00000	6.90731	2.50000	15.00000	5.98958
	c2p	0.02000	1.00000	0.06901	0.33000	9.00000	0.08278	2.50000	15.00000	0.22318
sg13g2_IOPadOut30mA	c2p	0.02000	2.00000	40.79510	0.33000	18.00000	24.20990	2.50000	30.00000	19.98700
	c2p	0.02000	2.00000	0.06901	0.33000	18.00000	0.08277	2.50000	30.00000	0.22301
sg13g2_IOPadOut4mA	c2p	0.02000	1.00000	1.53875	0.33000	4.00000	1.48274	2.50000	10.00000	1.46260
	c2p	0.02000	1.00000	0.06905	0.33000	4.00000	0.08279	2.50000	10.00000	0.22325

Passive power(pJ) for c2p rising :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
sg13g2_IOPadInOut30mA	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
sg13g2_IOPadInOut4mA	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168

Passive power(pJ) for c2p falling :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
sg13g2_IOPadInOut30mA	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
sg13g2_IOPadInOut4mA	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448

Passive power(pJ) for c2p rising (conditional):

Cell Name	When	Power(pJ)					
		Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	(!c2p_en * pad * p2c)	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * pad * p2c)	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
	(!c2p_en * !pad * !p2c)	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * !pad * !p2c)	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
sg13g2_IOPadInOut30mA	(!c2p_en * pad * p2c)	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * pad * p2c)	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
	(!c2p_en * !pad * !p2c)	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * !pad * !p2c)	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
sg13g2_IOPadInOut4mA	(!c2p_en * pad * p2c)	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * pad * p2c)	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168
	(!c2p_en * !pad * !p2c)	0.02000	-0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * !pad * !p2c)	0.02000	-0.02014	0.33000	-0.02139	2.50000	-0.02168

Passive power(pJ) for c2p falling (conditional):

Cell Name	When	Power(pJ)					
		Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	(!c2p_en * pad * p2c)	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * pad * p2c)	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
	(!c2p_en * !pad * !p2c)	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * !pad * !p2c)	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
sg13g2_IOPadInOut30mA	(!c2p_en * pad * p2c)	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * pad * p2c)	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
	(!c2p_en * !pad * !p2c)	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * !pad * !p2c)	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
sg13g2_IOPadInOut4mA	(!c2p_en * pad * p2c)	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * pad * p2c)	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448
	(!c2p_en * !pad * !p2c)	0.02000	0.00001	0.33000	0.00000	2.50000	0.00000
	(!c2p_en * !pad * !p2c)	0.02000	0.02516	0.33000	0.02453	2.50000	0.02448

Passive power(pJ) for c2p_en rising :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	0.02000	1.29844	0.33000	1.29970	2.50000	1.30505
	0.02000	0.04615	0.33000	0.05072	2.50000	0.13341
sg13g2_IOPadInOut30mA	0.02000	2.04899	0.33000	2.04899	2.50000	2.05404
	0.02000	0.04616	0.33000	0.05073	2.50000	0.13332
sg13g2_IOPadInOut4mA	0.02000	0.66103	0.33000	0.66112	2.50000	0.66209
	0.02000	0.04614	0.33000	0.05070	2.50000	0.13331

Passive power(pJ) for c2p_en falling :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	0.02000	0.21458	0.33000	0.21392	2.50000	0.21208
	0.02000	0.09829	0.33000	0.10345	2.50000	0.18681
sg13g2_IOPadInOut30mA	0.02000	0.20696	0.33000	0.20631	2.50000	0.20429
	0.02000	0.09829	0.33000	0.10345	2.50000	0.18671
sg13g2_IOPadInOut4mA	0.02000	0.23266	0.33000	0.23198	2.50000	0.23011
	0.02000	0.09829	0.33000	0.10345	2.50000	0.18674

Passive power(pJ) for pad rising :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	0.02000	5.15034	0.33000	5.04639	2.50000	4.83744
	0.02000	1.86475	0.33000	7.26271	2.50000	17.17190
	0.02000	4.78062	0.33000	4.91871	2.50000	5.41014
	0.02000	1.83120	0.33000	7.25336	2.50000	17.10610
sg13g2_IOPadInOut30mA	0.02000	8.11869	0.33000	7.83213	2.50000	7.63047
	0.02000	1.85967	0.33000	7.26554	2.50000	11.87060
	0.02000	7.21427	0.33000	7.21002	2.50000	7.32363
	0.02000	1.82767	0.33000	7.24285	2.50000	11.84780
sg13g2_IOPadInOut4mA	0.02000	2.85209	0.33000	2.78796	2.50000	2.61450
	0.02000	1.86799	0.33000	7.30115	2.50000	18.30930
	0.02000	2.69481	0.33000	2.99493	2.50000	3.50976
	0.02000	1.83190	0.33000	7.27584	2.50000	18.28620
sg13g2_IOPadOut16mA	0.02000	4.95659	0.33000	4.82775	2.50000	4.75200
	0.02000	-0.01145	0.33000	-0.00079	2.50000	0.14242
sg13g2_IOPadOut30mA	0.02000	7.86985	0.33000	7.51998	2.50000	7.38687
	0.02000	-0.01145	0.33000	-0.00082	2.50000	0.14239
sg13g2_IOPadOut4mA	0.02000	2.56939	0.33000	2.50011	2.50000	2.47593
	0.02000	-0.01145	0.33000	-0.00080	2.50000	0.14249

Passive power(pJ) for pad falling :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadInOut16mA	0.02000	10.47290	0.33000	8.14068	2.50000	6.27296
	0.02000	0.20674	0.33000	0.21090	2.50000	0.35187
	0.02000	1.97880	0.33000	1.97361	2.50000	1.97114
	0.02000	0.10540	0.33000	0.10912	2.50000	0.19035
sg13g2_IOPadInOut30mA	0.02000	41.50160	0.33000	35.53430	2.50000	27.87700
	0.02000	0.20671	0.33000	0.21087	2.50000	0.35014
	0.02000	3.33233	0.33000	3.33698	2.50000	3.32419
	0.02000	0.10532	0.33000	0.10942	2.50000	0.18538
sg13g2_IOPadInOut4mA	0.02000	1.42701	0.33000	1.41995	2.50000	1.41495
	0.02000	0.20648	0.33000	0.21225	2.50000	0.35696
	0.02000	0.83144	0.33000	0.82958	2.50000	0.83027
	0.02000	0.10523	0.33000	0.11021	2.50000	0.19660
sg13g2_IOPadOut16mA	0.02000	11.36590	0.33000	6.90731	2.50000	5.98958
	0.02000	0.06901	0.33000	0.08278	2.50000	0.22318
sg13g2_IOPadOut30mA	0.02000	40.79510	0.33000	24.20990	2.50000	19.98700
	0.02000	0.06901	0.33000	0.08277	2.50000	0.22301
sg13g2_IOPadOut4mA	0.02000	1.53875	0.33000	1.48274	2.50000	1.46260
	0.02000	0.06905	0.33000	0.08279	2.50000	0.22325

INPUT



*sg13g2_io_slow_1p35V_3p0V_125C Cell Library: Process
sg13g2_io_slow_1p35V_3p0V_125C, Voltage 1.35, Temp 125.00*

Truth Table

INPUT	OUTPUT
pad	p2c
0	0
1	1

Footprint

Cell Name	Area
sg13g2_IOPadIn	14400.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)	Max Cap(pf)
	pad	p2c
sg13g2_IOPadIn	0.22102	0.73716

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadIn	0.00000	2150.91000	3108.07000

Delay Information

Delay(ns) to p2c rising :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadIn	pad->p2c (RR)	0.12000	0.02400	0.11205	0.60000	0.14400	0.21172	3.50000	0.24000	0.28425

Delay(ns) to p2c falling :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadIn	pad->p2c (FF)	0.12000	0.02400	0.40026	0.60000	0.14400	0.72225	3.50000	0.24000	2.21409

Power Information

Internal switching power(pJ) to p2c rising :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadIn	pad	0.12000	0.02400	0.00000	0.60000	0.14400	0.00000	3.50000	0.24000	0.00000
	pad	0.12000	0.02400	0.00763	0.60000	0.14400	0.00587	3.50000	0.24000	0.00540

Internal switching power(pJ) to p2c falling :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadIn	pad	0.12000	0.02400	-0.00000	0.60000	0.14400	-0.00000	3.50000	0.24000	-0.00000
	pad	0.12000	0.02400	0.06234	0.60000	0.14400	0.05809	3.50000	0.24000	0.06034

SG13G2_IOPADIOVDD



sg13g2_io_slow_1p35V_3p0V_125C
Cell Library: Process
sg13g2_io_slow_1p35V_3p0V_125C,
Voltage 1.35, Temp 125.00

Footprint

Cell Name	Area
sg13g2_IOPadIOVdd	14400.00000

Pin Capacitance Information

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadIOVdd	0.00000	26693.50000	26693.50000

SG13G2_IOPADIOVSS



sg13g2_io_slow_1p35V_3p0V_125C
Cell Library: Process
sg13g2_io_slow_1p35V_3p0V_125C,
Voltage 1.35, Temp 125.00

Footprint

Cell Name	Area
sg13g2_IOPadIOVss	14400.00000

Pin Capacitance Information

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadIOVss	0.00000	1.91726	1.91726

SG13G2_IOPADVDD



sg13g2_io_slow_1p35V_3p0V_125C
Cell Library: Process
sg13g2_io_slow_1p35V_3p0V_125C,
Voltage 1.35, Temp 125.00

Footprint

Cell Name	Area
sg13g2_IOPadVdd	14400.00000

Pin Capacitance Information

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadVdd	0.00000	5.66442	5.66442

SG13G2_IOPADVSS



sg13g2_io_slow_1p35V_3p0V_125C
Cell Library: Process
sg13g2_io_slow_1p35V_3p0V_125C,
Voltage 1.35, Temp 125.00

Footprint

Cell Name	Area
sg13g2_IOPadVss	14400.00000

Pin Capacitance Information

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadVss	0.00000	1.20533	1.20533

TRI_OUTx



*sg13g2_io_slow_1p35V_3p0V_125C Cell Library:
Process sg13g2_io_slow_1p35V_3p0V_125C, Voltage
1.35, Temp 125.00*

Truth Table

INPUT		OUTPUT
c2p	c2p_en	pad
-	0	HiZ
0	1	0
1	1	1

Footprint

Cell Name	Area
sg13g2_IOPadTriOut16mA	14400.00000
sg13g2_IOPadTriOut30mA	14400.00000
sg13g2_IOPadTriOut4mA	14400.00000

Pin Capacitance Information

Cell Name	Pin Cap(pf)		Max Cap(pf)
	c2p	c2p_en	pad
sg13g2_IOPadTriOut16mA	0.02681	0.02567	2.15294
sg13g2_IOPadTriOut30mA	0.02681	0.02567	0.37079
sg13g2_IOPadTriOut4mA	0.02681	0.02566	0.66125

Leakage Information

Cell Name	Leakage(pW)		
	Min.	Avg	Max.
sg13g2_IOPadTriOut16mA	937.30000	14212.80000	14974.60000
sg13g2_IOPadTriOut30mA	1341.23000	15540.60000	15540.60000
sg13g2_IOPadTriOut4mA	536.30600	13029.60000	14974.90000

Delay Information

Delay(ns) to pad rising :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadTriOut16mA	c2p->pad (RR)	0.02000	1.00000	2.23807	0.33000	4.00000	2.91304	2.50000	10.00000	3.98707
	c2p_en->pad (FR)	0.02000	1.00000	1.59749	0.33000	4.00000	1.66795	2.50000	10.00000	1.85047
	c2p_en->pad (RR)	0.02000	1.00000	2.22088	0.33000	4.00000	2.91332	2.50000	10.00000	4.01640
sg13g2_IOPadTriOut30mA	c2p->pad (RR)	0.02000	1.00000	2.52507	0.33000	4.00000	3.09767	2.50000	10.00000	3.84987
	c2p_en->pad (FR)	0.02000	1.00000	1.86845	0.33000	4.00000	1.92895	2.50000	10.00000	2.11607
	c2p_en->pad (RR)	0.02000	1.00000	2.47570	0.33000	4.00000	3.07818	2.50000	10.00000	3.85505
sg13g2_IOPadTriOut4mA	c2p->pad (RR)	0.02000	1.00000	2.27879	0.33000	4.00000	4.32006	2.50000	10.00000	8.35182
	c2p_en->pad (FR)	0.02000	1.00000	1.33247	0.33000	4.00000	1.39799	2.50000	10.00000	1.58545
	c2p_en->pad (RR)	0.02000	1.00000	2.28268	0.33000	4.00000	4.37963	2.50000	10.00000	8.53300

Delay(ns) to pad falling :

Cell Name	Timing Arc(Dir)	Delay(ns)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadTriOut16mA	c2p->pad (FF)	0.02000	1.00000	1.65636	0.33000	4.00000	2.25026	2.50000	10.00000	3.50108
	c2p_en->pad (FF)	0.02000	1.00000	1.60845	0.33000	4.00000	1.69878	2.50000	10.00000	1.95844
	c2p_en->pad (RF)	0.02000	1.00000	1.39938	0.33000	4.00000	2.02866	2.50000	10.00000	3.08159
sg13g2_IOPadTriOut30mA	c2p->pad (FF)	0.02000	1.00000	2.08108	0.33000	4.00000	2.51096	2.50000	10.00000	3.38318
	c2p_en->pad (FF)	0.02000	1.00000	2.49341	0.33000	4.00000	2.57333	2.50000	10.00000	2.83519
	c2p_en->pad (RF)	0.02000	1.00000	1.49542	0.33000	4.00000	1.98365	2.50000	10.00000	2.65667
sg13g2_IOPadTriOut4mA	c2p->pad (FF)	0.02000	1.00000	1.74319	0.33000	4.00000	3.78734	2.50000	10.00000	8.05284
	c2p_en->pad (FF)	0.02000	1.00000	0.88567	0.33000	4.00000	0.96295	2.50000	10.00000	1.23545
	c2p_en->pad (RF)	0.02000	1.00000	1.72899	0.33000	4.00000	3.80674	2.50000	10.00000	7.90497

Power Information

Internal switching power(pJ) to pad rising :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadTriOut16mA	c2p	0.02000	1.00000	4.93064	0.33000	4.00000	4.93359	2.50000	10.00000	4.77522
	c2p	0.02000	1.00000	0.06169	0.33000	4.00000	0.06630	2.50000	10.00000	0.20747
	c2p_en	0.02000	1.00000	4.54540	0.33000	4.00000	4.85970	2.50000	10.00000	5.15625
	c2p_en	0.02000	1.00000	0.02776	0.33000	4.00000	0.03727	2.50000	10.00000	0.19423
sg13g2_IOPadTriOut30mA	c2p	0.02000	1.00000	7.98034	0.33000	4.00000	7.75644	2.50000	10.00000	7.71147
	c2p	0.02000	1.00000	0.06167	0.33000	4.00000	0.06628	2.50000	10.00000	0.20746
	c2p_en	0.02000	1.00000	6.98408	0.33000	4.00000	7.10799	2.50000	10.00000	7.38165
	c2p_en	0.02000	1.00000	0.02774	0.33000	4.00000	0.03725	2.50000	10.00000	0.19274
sg13g2_IOPadTriOut4mA	c2p	0.02000	1.00000	2.56528	0.33000	4.00000	2.48394	2.50000	10.00000	2.37018
	c2p	0.02000	1.00000	0.06177	0.33000	4.00000	0.06637	2.50000	10.00000	0.20760
	c2p_en	0.02000	1.00000	2.40587	0.33000	4.00000	2.69817	2.50000	10.00000	3.35763
	c2p_en	0.02000	1.00000	0.02784	0.33000	4.00000	0.03734	2.50000	10.00000	0.19680

Internal switching power(pJ) to pad falling :

Cell Name	Input	Power(pJ)								
		Slew(ns)	Load(pf)	First	Slew(ns)	Load(pf)	Mid	Slew(ns)	Load(pf)	Last
sg13g2_IOPadTriOut16mA	c2p	0.02000	1.00000	10.56740	0.33000	4.00000	8.22515	2.50000	10.00000	6.35357
	c2p	0.02000	1.00000	0.14920	0.33000	4.00000	0.15385	2.50000	10.00000	0.29531
	c2p_en	0.02000	1.00000	2.01232	0.33000	4.00000	2.01381	2.50000	10.00000	2.01055
	c2p_en	0.02000	1.00000	0.04699	0.33000	4.00000	0.05151	2.50000	10.00000	0.13371
sg13g2_IOPadTriOut30mA	c2p	0.02000	1.00000	41.59950	0.33000	4.00000	35.63540	2.50000	10.00000	27.98550
	c2p	0.02000	1.00000	0.14915	0.33000	4.00000	0.15379	2.50000	10.00000	0.29508
	c2p_en	0.02000	1.00000	3.36232	0.33000	4.00000	3.36698	2.50000	10.00000	3.36910
	c2p_en	0.02000	1.00000	0.04690	0.33000	4.00000	0.05142	2.50000	10.00000	0.13293
sg13g2_IOPadTriOut4mA	c2p	0.02000	1.00000	1.49763	0.33000	4.00000	1.48864	2.50000	10.00000	1.48372
	c2p	0.02000	1.00000	0.14951	0.33000	4.00000	0.15415	2.50000	10.00000	0.29537
	c2p_en	0.02000	1.00000	0.86487	0.33000	4.00000	0.86479	2.50000	10.00000	0.86531
	c2p_en	0.02000	1.00000	0.04729	0.33000	4.00000	0.05183	2.50000	10.00000	0.13555

Passive power(pJ) for c2p rising :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadTriOut16mA	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	0.02000	-0.02017	0.33000	-0.02143	2.50000	-0.02195
sg13g2_IOPadTriOut30mA	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	0.02000	-0.02018	0.33000	-0.02143	2.50000	-0.02195
sg13g2_IOPadTriOut4mA	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	0.02000	-0.02018	0.33000	-0.02143	2.50000	-0.02195

Passive power(pJ) for c2p falling :

Cell Name	Power(pJ)					
	Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadTriOut16mA	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	0.02000	0.02499	0.33000	0.02439	2.50000	0.02432
sg13g2_IOPadTriOut30mA	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	0.02000	0.02498	0.33000	0.02436	2.50000	0.02431
sg13g2_IOPadTriOut4mA	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	0.02000	0.02499	0.33000	0.02429	2.50000	0.02401

Passive power(pJ) for c2p rising (conditional):

Cell Name	When	Power(pJ)					
		Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadTriOut16mA	!c2p_en	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	!c2p_en	0.02000	-0.02017	0.33000	-0.02143	2.50000	-0.02195
sg13g2_IOPadTriOut30mA	!c2p_en	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	!c2p_en	0.02000	-0.02018	0.33000	-0.02143	2.50000	-0.02195
sg13g2_IOPadTriOut4mA	!c2p_en	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	!c2p_en	0.02000	-0.02018	0.33000	-0.02143	2.50000	-0.02195

Passive power(pJ) for c2p falling (conditional):

Cell Name	When	Power(pJ)					
		Slew(ns)	First	Slew(ns)	Mid	Slew(ns)	Last
sg13g2_IOPadTriOut16mA	!c2p_en	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	!c2p_en	0.02000	0.02499	0.33000	0.02439	2.50000	0.02432
sg13g2_IOPadTriOut30mA	!c2p_en	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	!c2p_en	0.02000	0.02498	0.33000	0.02436	2.50000	0.02431
sg13g2_IOPadTriOut4mA	!c2p_en	0.02000	0.00000	0.33000	0.00000	2.50000	0.00000
	!c2p_en	0.02000	0.02499	0.33000	0.02429	2.50000	0.02401