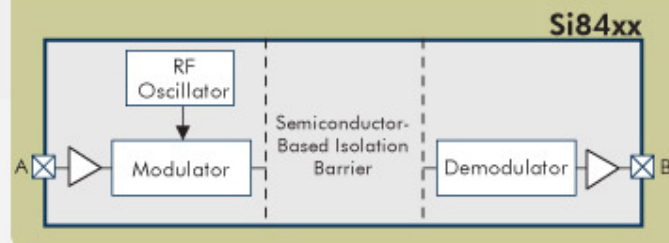


Digital Isolators

Si84xx ISOpro Digital Isolators

Silicon Laboratories' family of digital isolators are the industry's highest-performance, easiest-to-use, lowest-cost 2500 Vrms digital isolators.

Block Diagram

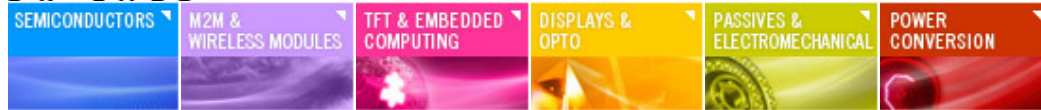


Features

- High integration: up to 6 isolation channels in a single package
- High-speed operation: DC–150 Mbps
- Wide operating supply voltage: 2.7-5.5 V
- Low power
- Precise timing
 - Less than 10 ns propagation delay
 - 2 ns pulse width distortion
 - 1 ns channel-channel matching
 - 2 ns pulse width skew
- 2500 VRMS isolation
- Transient immunity: >25 kV/μs
- Enable controlled outputs
- DC correct
- No start-up initialization required

Applications

- Example circuit applications
 - Isolation
 - Level shifting
 - Ground loop elimination
- Example end applications
 - Isolated analog data acquisition
 - Operator interface controls
 - AC-DC and dc-dc switching supplies
 - Plasma TVs
 - USB/CAN/I²C networks
 - Isolated point-to-point communications
 - Motor control
 - UPS systems



Product Matrix

Unidirectional Isolators

Part Number	Isolated Channels	Reverse Data Channel Options	Enable Control	Isolation Rating		Available Data Rates	Package		
				1.0 kV	2.5 kV		NB SOIC8	WB SOIC16	NB SOIC16
SI841x	1	-			•	1,150 Mbps	•		
SI842x	2	1			•	1,150 Mbps	•		
SI843x	3	1, 2	•		•	1,150 Mbps		•	•
SI844x	4	1, 2	•	•	•	1,150 Mbps		•	•
SI845x	5	1, 2	•	•	•	1,150 Mbps			•
SI846x	6	1, 2, 3	•	•	•	1,150 Mbps			•

Bidirectional Isolators (I²C, SMBus, PMBus)

Part Number	Bidirectional Serial Data	Bidirectional Serial Clock	Data Channels Fwd, Rev	Isolation Rating		Maximum I ² C Clock Rate (MHz)	Package		
				1.0 kV	2.5 kV		NB SOIC8	WB SOIC16	NB SOIC16
SI8400	•	•	0, 0	•	•	1.7	•		
SI8405	•	•	1, 1	•	•	1.7			•