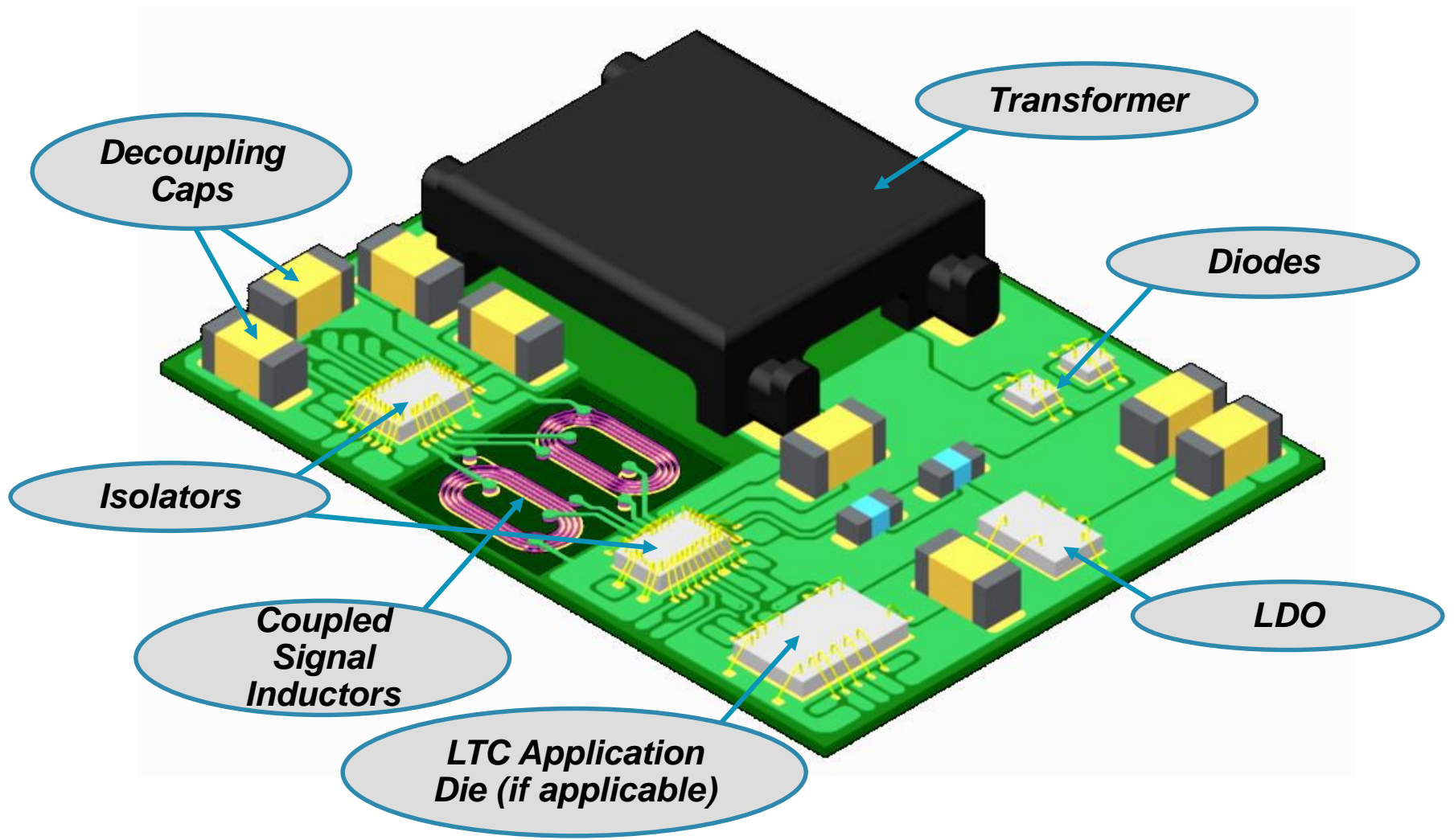




μ Module Isolators

Isolator μ Module[®] Technology



Isolator μ Module[®] Technology: Features & Benefits

APPLICATION:

- High level of functional integration – No external components!
- Integrate any application with this isolation technique

POWER:

- High power levels (up to 2.5W)
- Surplus Power for the application

ISOLATION:

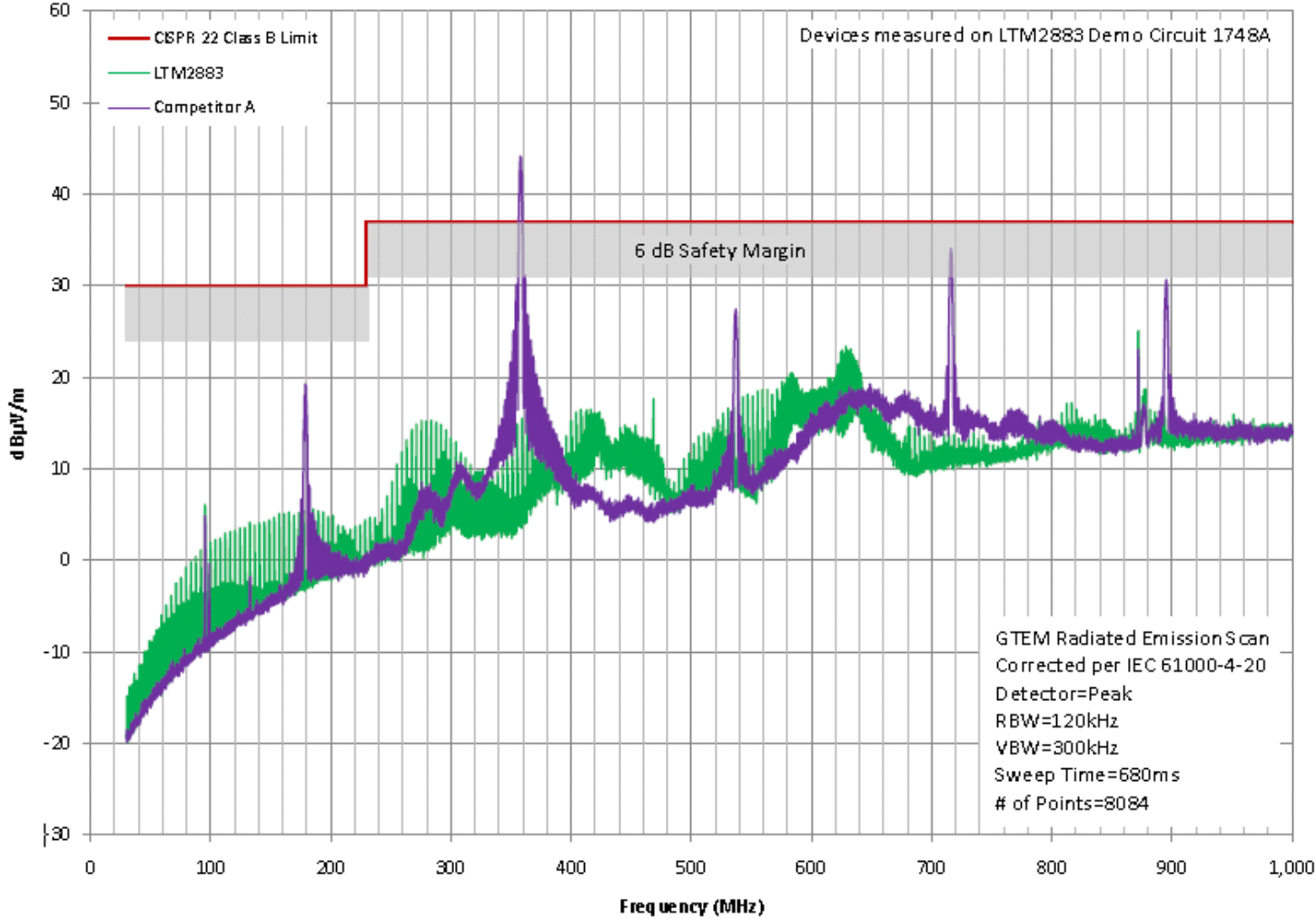
- Substrate PCB supports high Isolation (up to 7500V_{RMS})
- Certifications Pending: UL, CSA, IEC
- EMC Ratings Pending: Emissions & Immunity

COMMUNICATION:

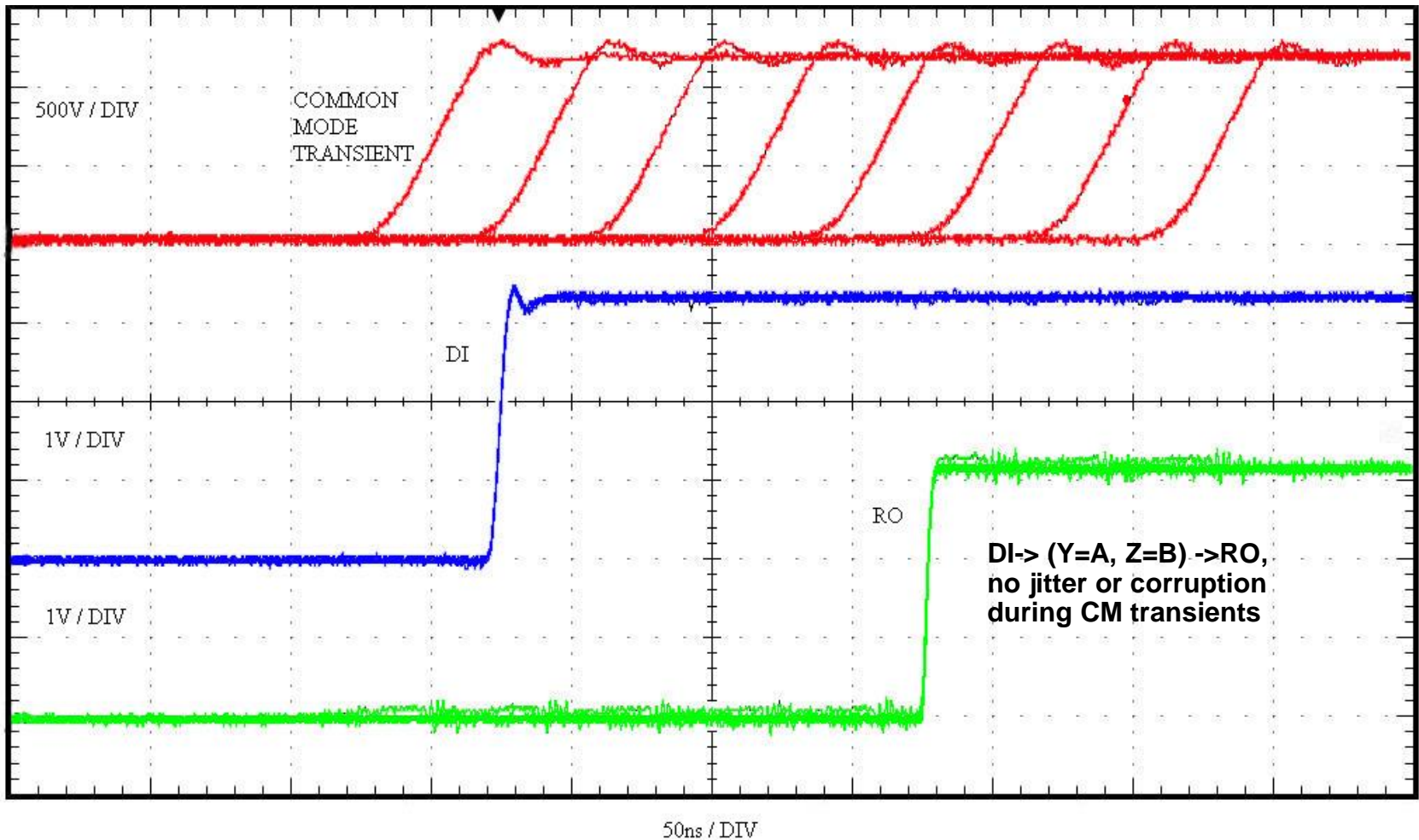
- Differential signaling and encoding yield superior signal integrity
- Prioritized, event driven, data encoding produces jitter free signals
- High data rates (20Mbps)
- Superior common mode transient immunity (up to 70kV/ μ s)



Low EMI – Example: LTM2883 vs. Competition



35kV/ μ s Common Mode Transient Immunity



Isolated Interface Product Markets:

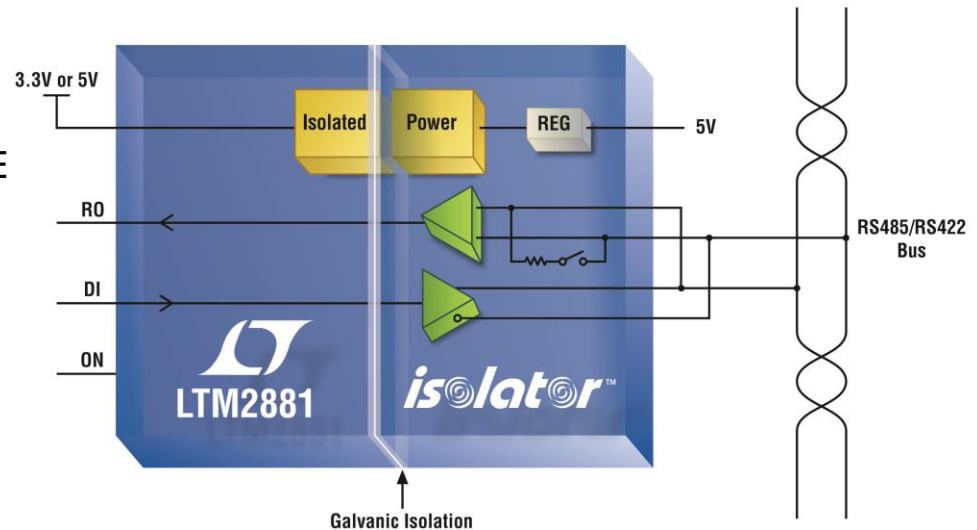
- **Industrial Equipment**
 - Process Controllers
 - Data Acquisition
 - Motor Controllers
 - Programmable Logic Controls (PLC)
 - Factory Automation
- **Medical**
 - Patient Monitoring
 - Medication Dispensing
- **Road Signs, Traffic Lights,**
- **Aircraft, Airport Lighting**
- **Trains and Railroad Signage**
- **Home: Security Systems**
- **Building Controls**
 - Heating Ventilating and Air Conditioning (HVAC)
 - Security Systems
- **Heavy Equipment**
 - Cranes, Forklifts
 - Oil Drilling
 - Conveyor Systems
- **Metering**
 - Toll Collection
 - Supermarket Scales
 - Water/Liquid Flow Metering



LTM2881: Complete Isolated RS485/RS422 μ Module Transceiver + 1W Power

Features:

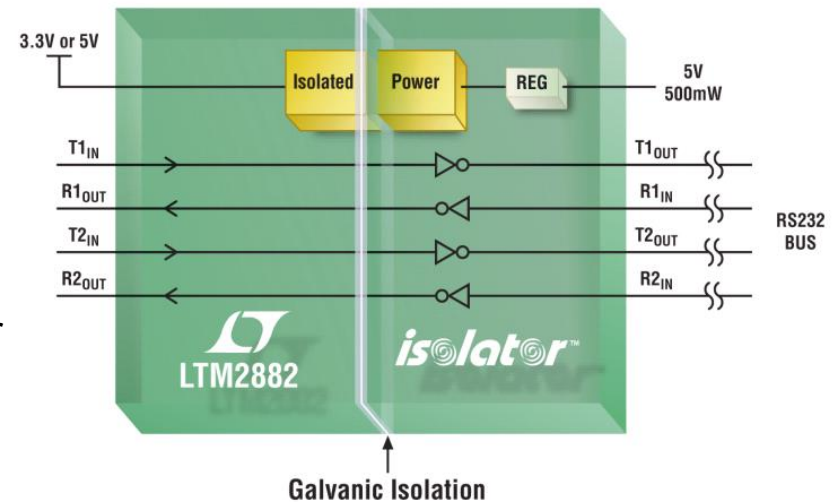
- ◆ Isolation: $2500V_{RMS}$ @1MIN, $560V_{PEAK}$ @LIFE
- ◆ Integrated, Isolated 1W DC/DC Converter
- ◆ Data Rate: 20Mbps or Low-EMI 250kbps
- ◆ Selectable 120 Ω Termination
- ◆ CM Transient Immunity: $>30kV/\mu s$
- ◆ High ESD: $\pm 15kV$ HBM
- ◆ Logic Interface: $V_L = 1.62V$ to 5.5V
- ◆ Spare isolated logic output (fault detect)
- ◆ 3.3V (LTM2881-3) or 5V (LTM2881-5) Operation
- ◆ Low Profile Surface Mount LGA and BGA Packages



LTM2882: Dual Isolated RS232 μ Module[®] Transceiver + 1W Power

Features:

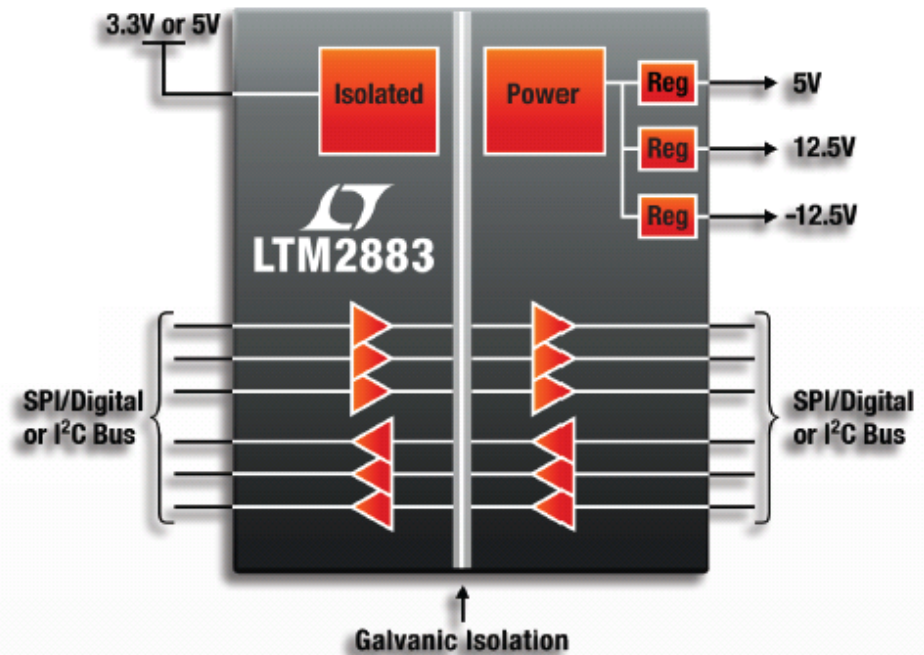
- ◆ Isolation: $2500V_{RMS}$ @1MIN, $560V_{PEAK}$ @LIFE
- ◆ Integrated Isolated DC/DC Converter
- ◆ Logic Interface: $V_L = 1.62V$ to $5.5V$
- ◆ High Speed Operation (Up to 1Mbps)
- ◆ No Damage or Latchup to $\pm 10kV$ ESD (HBM) on
- ◆ Isolated RS232 Interface and across Isolation Barrier
- ◆ CM Transient Immunity: $>30kV/\mu s$
- ◆ 3.3V (LTM2882-3) or 5V (LTM2882-5) Operation
- ◆ Low Profile Surface Mount LGA and BGA Packages



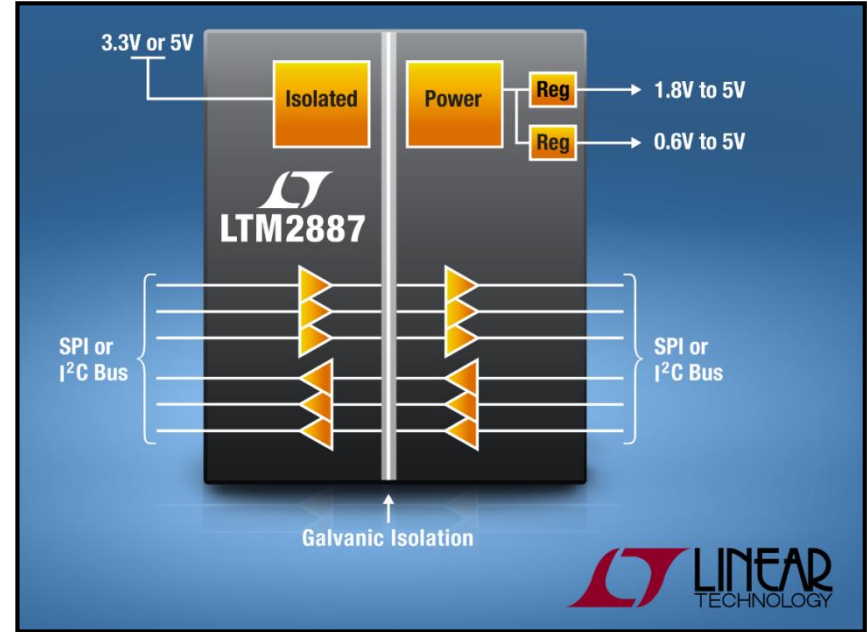
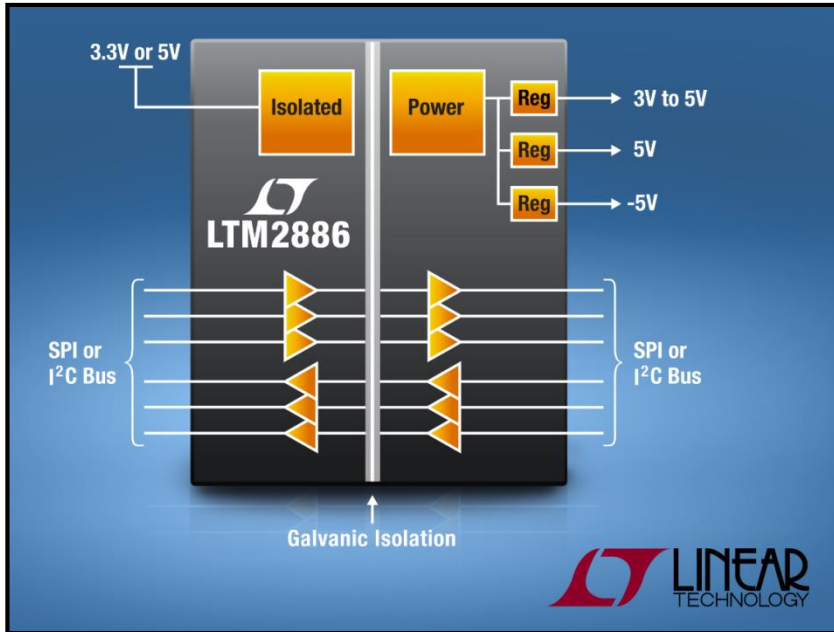
LTM2883: SPI/Digital or I²C μModule[®] Isolator with Adjustable ±12V and 5V Power

Features:

- ◆ Six Channel Logic Isolator: 2500V_{RMS}
- ◆ Isolated Adjustable DC Power
 - ◆ 3V to 5V at Up to 30mA
 - ◆ ±12.5V at Up to 25mA
- ◆ High Speed Operation
 - ◆ 10MHz Digital Isolation
 - ◆ 4Mhz/8MHz SPI Isolation
 - ◆ 400kHz I²C Isolation
- ◆ CM Transient Immunity: >30kV/μs
- ◆ 3.3V (LTM2883-3) or 5V (LTM2883-5) Operation
- ◆ Low Profile Surface Mount BGA Package



LTM2886 & LTM2887: SPI/Digital or I²C μModule[®] Isolators with Power

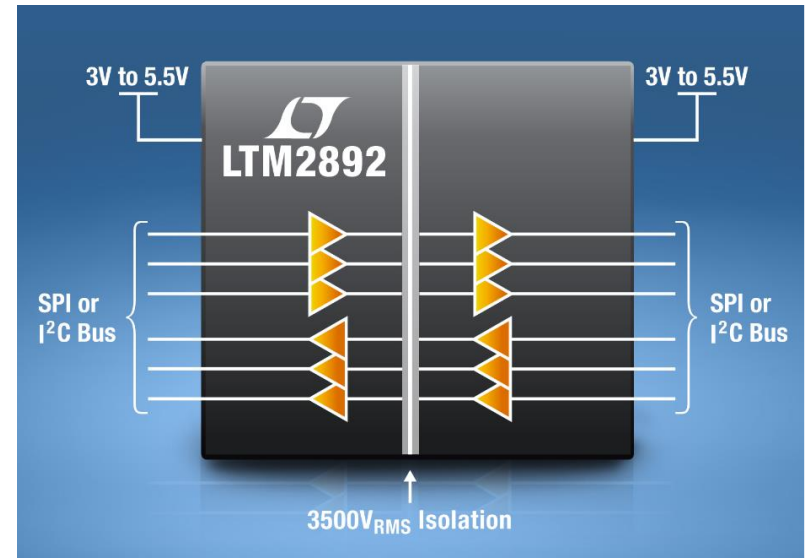


	LTM2883	LTM2886	LTM2887
Isolated Power Supply 1	Adj. 3V-5V @ 30mA	Adj. 3V-5V @ 30mA	Adj. 1.8V-5V @ 100mA
Isolated Power Supply 2	Adj. +12V @ 20mA	Fixed +5V @ 100mA	Adj. 0.6V-5V @ 100mA
Isolated Power Supply 3	Adj. -12V @ 20mA	Fixed -5V @ 100mA	-

LTM2892: SPI/Digital or I²C μModule[®] Isolator

Features:

- ◆ Six Channel Isolator: 3500V_{RMS}
- ◆ No External Components Required
- ◆ High Common Mode Transient Immunity: >50kV/μs Operating
- ◆ ±15kV ESD HBM Across the Isolation Barrier, ±4kV ESD on Pins
- ◆ Low Current Shutdown Mode (<10μA)
- ◆ 9mm x 6mm BGA Package



LTM2893/95: 100MHz Isolated ADC/DAC Serial Interface

FEATURES:

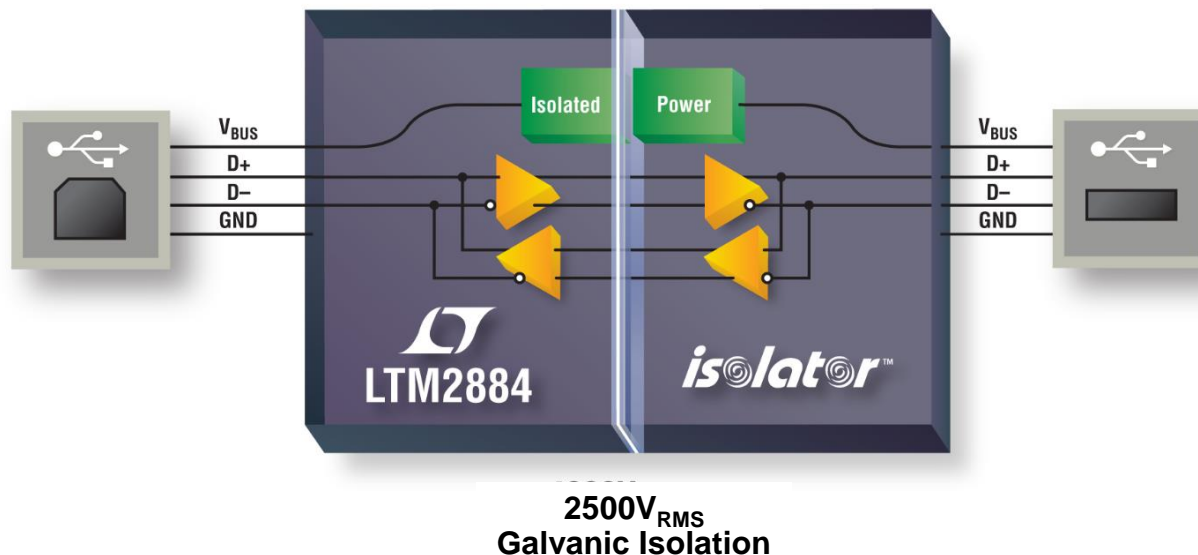
- ◆ 100MHz SPI Compatible I/O
- ◆ Isolated Interface: 6000V_{RMS}
- ◆ Conf. SPI Word-Length: 8 to 32 Bits
- ◆ Low Jitter Control Signals
- ◆ Read Only (LTM2893), R/W (LTM2893-1)
- ◆ 3 Isolated Control or Multiplexer Select Signals
- ◆ 50kV/ μ s CM Transient Immunity
- ◆ No External Components Required
- ◆ 15mm x 6.25mm BGA Package



LTM2884: Isolated USB Transceiver with Isolated Power

Features:

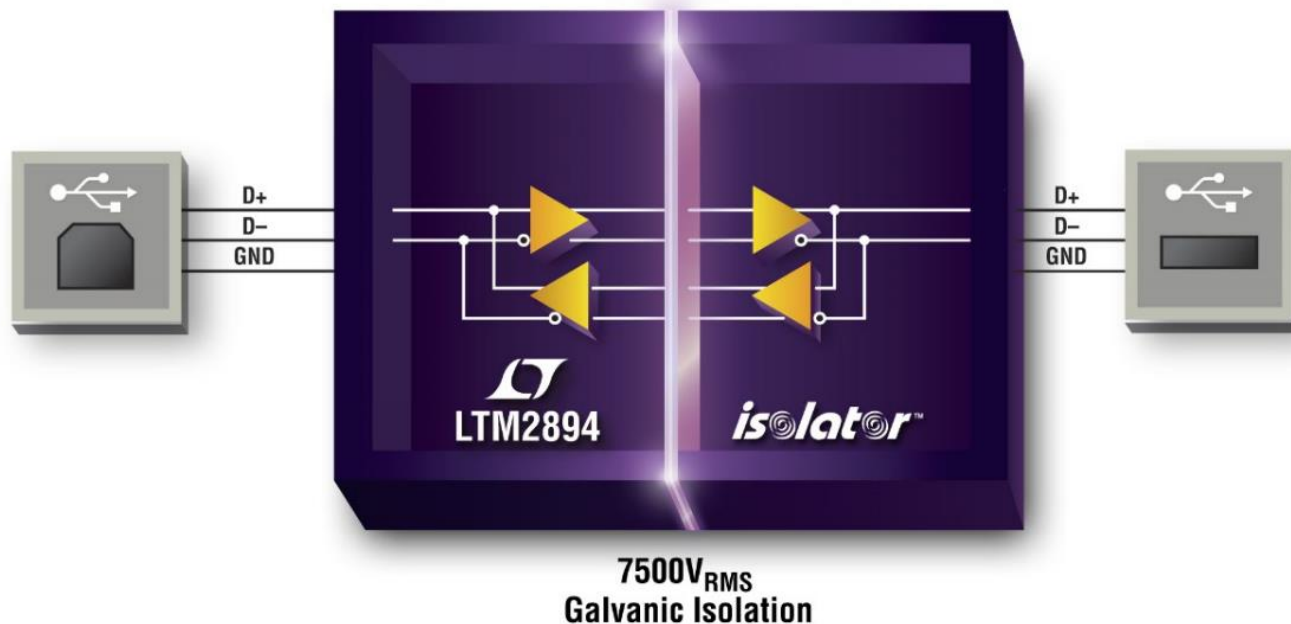
- ◆ Isolated USB Transceiver: $2500V_{RMS}$
- ◆ USB 2.0 Full Speed (12Mbps) and Low Speed (1.5Mbps) Compatible
- ◆ Auto-Configuration of Bus Speed
- ◆ Integrated Isolated DC/DC Converter, External or Bus Powered
- ◆ 2.5W (500mA at 5V) Output Power from External Input Supply ($V_{CC}=8.1V$ to $16.5V$); 1W (200mA at 5V) Output Power from USB Bus Supply (V_{BUS})
- ◆ 3.3V LDO Output Supply Signal References
- ◆ 15mm x 15mm Surface Mount BGA



LTM2894: Isolated USB Data Transceiver

Features:

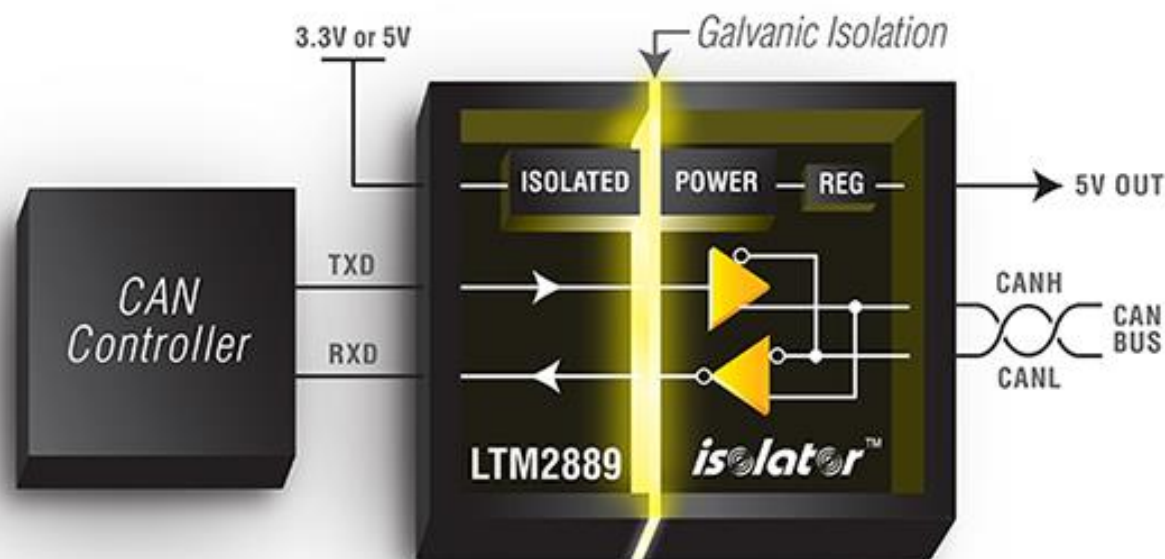
- ◆ Isolated USB Transceiver: 7500V_{RMS}
- ◆ USB 2.0 Full Speed (12Mbps) and Low Speed (1.5Mbps) Compatible
- ◆ Auto-Configuration of Bus Speed
- ◆ 4.4V to 36V Operating Range
- ◆ 50kV/ μ s Common Mode Transient Immunity
- ◆ \pm 20kV HBM ESD Protection
- ◆ 3.3V LDO Output Supply Signal References
- ◆ 17.4mm Creepage Distance
- ◆ 15mm x 15mm Surface Mount BGA



LTM2889: Isolated CAN FD μ Module Transceiver and Power

FEATURES:

- ◆ Isolated 4Mbps CAN FD Transceiver
- ◆ 2500VRMS for 1 Minute Per UL1577
- ◆ Isolated DC Power: 5V (Adj to 3.3V)
- ◆ 3.3V or 5V Supply Options
- ◆ $\pm 60V$ Overvoltage Protection
- ◆ 30kV/ μs CM Transient Immunity
- ◆ No External Components Required
- ◆ 15mm x 11.25mm BGA Package



Interface μ Module *isolator*™ Family

Партномер	Протокол	Изоляция (V _{RMS})	# Dri/Rec	Напряжение питания (V)	Макс. Скорость передачи данных	Интегрированный, изолированный DC/DC преобразователь	Макс. темпера тура
LTM2881	RS485	2500	1/1	5/3.3	20Mbps	5V (1W)	105°C
LTM2882	RS232	2500	2/2	5/3.3	1Mbps	5V (1W)	105°C
LTM2883-S	SPI/Digital	2500	3/3	5/3.3	10MHz	Adj. 3V-5V, Adj. \pm 12V (0.6W)	105°C
LTM2886-S	SPI/Digital	2500	3/3	5/3.3	10MHz	Adj. 3V-5V, Fixed \pm 5V (1W)	105°C
LTM2887-S	SPI/Digital	2500	3/3	5/3.3	10MHz	Adj. 1.8V-5V, Adj. 0.6V-5V (1W)	105°C
LTM2892-S	SPI/Digital	3500	3/3	1.62 to 5.5	10MHz	-	125°C
LTM2893	SPI ADC	6000	1/1	3 to 5.5	100MHz	-	125°C
LTM2895	SPI DAC	6000	1/1	3 to 5.5	100MHz	-	125°C
LTM2883-I	I ² C	2500	3/3	5/3.3	400kHz	Adj. 3V-5V, Adj. \pm 12V (0.6W)	105°C
LTM2886-I	I ² C	2500	3/3	5/3.3	400kHz	Adj. 3V-5V, Fixed \pm 5V (1W)	105°C
LTM2887-I	I ² C	2500	3/3	5/3.3	400kHz	Adj. 1.8V-5V, Adj. 0.6V-5V (1W)	105°C
LTM2892-I	I ² C	3500	3/3	3 to 5.5	400kHz	-	125°C
LTM2884	USB	4000	1/1	4.4 to 16.5	12Mbps	2.5W from External Supply, 1W from USB	105°C
LTM2894	USB	7500	1/1	4.4 to 36	12Mbps	-	125°C
LTM2889	CAN	2500	1/1	5/3.3	4Mbps	Adj. 3V-5V (0.75W)	105°C