

Intelligent 3 Tx/5 Rx 3.0 to 5.5V RS-232 Transceiver

PRODUCTS

MxL83947 Industrial temperature 3 Tx/5 Rx RS-232 in a QFN-32

FEATURES

- Meets true EIA/TIA-232-F standards from a 3.0V to 5.5V power supply
- Interoperable with EIA/TIA-232 and adheres to EIA/TIA-562 down to a 2.7V power source
- AUTO-ONLINE[®] circuitry automatically wakes up from a <0.8μA shutdown
- Regulated charge pump yields stable RS-232 outputs regardless of V_{CC} variations
- Enhanced ESD specifications:
 - ±15kV human body model
 - ±15kV IEC61000-4-2 air discharge
 - ±8kV IEC61000-4-2 contact discharge
- 1000kbps minimum transmission rate
- Ideal for high-speed RS-232 applications

BENEFITS

- Ultra low standby and shutdown power consumption
- Auto wake-up from shutdown
- Small 5x5 QFN package
- Pin compatible with industry standard
- High 25V receiver input tolerance
- Low channel to channel skew
- Fast propagation delay

APPLICATIONS

- Console servers
- Edge computing
- Industrial internet of things (IIoT)
- Industrial PC
- Data center servers and switches
- Consumer



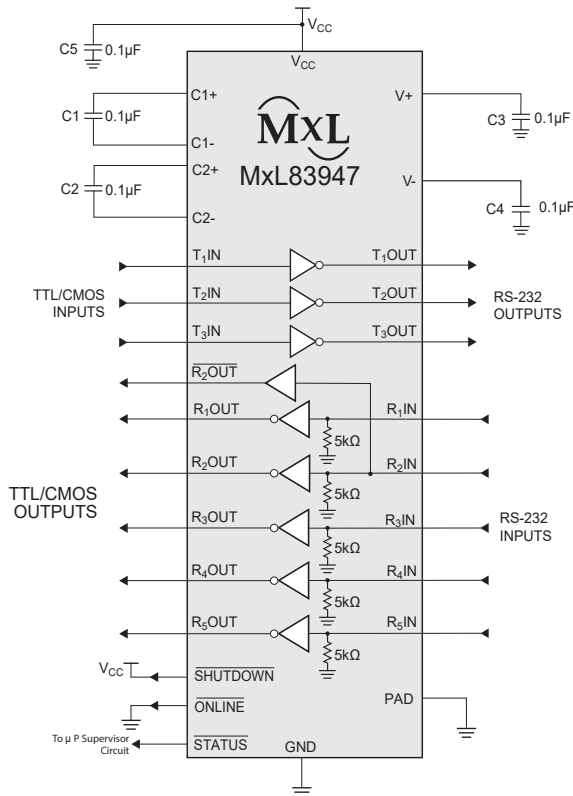
The MxL83947 device is a 3 driver/5 receiver RS-232 transceiver intended for portable or hand-held applications such as notebook and industrial computers. The MxL83947 includes one complementary receiver that remains alert to monitor an external device's Ring Indicate signal while the device is shut down. The device is optimized for high speed with data rates up to 1Mbps, and low propagation delays and channel to channel skew, easily meeting the demands of high-performance RS-232 applications. The MxL83947 uses an internal high-efficiency charge-pump power supply that requires only 0.1μF capacitors for operation. This charge pump and MaxLinear's driver architecture allow the device to deliver compliant RS-232 performance from a single power supply ranging from 3.0V to 5.5V. The AUTO-ONLINE[®] feature allows the device to automatically wake up during a shutdown state when an RS-232 cable is connected and a connected peripheral is turned on. Otherwise, the device automatically shuts itself down, drawing less than 1μA.

MxL83947 RS-232 Transceiver

Product Information

Device	Supply	Tx/Rx	AUTO-ONLINE®	Data Rate	ESD HBM/Contact	Package	Operating Temperature	Packaging Method
MxL83947-AQB-R	3.0 to 5.5V	3/5	Yes	1Mbps	±15kV/±8kV	32-QFN	-40°C to 85°C	Reel

Typical Operating Circuit



Industry Standard Pinout

Pin	MaxLinear	Industry	MaxLinear
	MxL83947	Standard	SP3243EUEER-L/TR
1	R1IN	RIN1	NC
2	R2IN	RIN2	R1IN
3	R3IN	RIN3	R2IN
4	R4IN	RIN4	R3IN
5	R5IN	RIN5	R4IN
6	T1OUT	DOU1	R5IN
7	T2OUT	DOU2	T1OUT
8	T3OUT	DOU3	T2OUT
9	NC	NC	T3OUT
10	T3IN	DIN3	T3IN
11	T2IN	DIN2	T2IN
12	T1IN	DIN1	T1IN
13	R5OUT	ROUT5	R5OUT
14	R4OUT	ROUT4	R4OUT
15	R3OUT	ROUT3	R3OUT
16	NC	NC	R2OUT
17	R2OUT	ROUT2	R1OUT
18	R1OUT	ROUT1	/R2OUT
19	/R2OUT	ROU2B2	/STATUS
20	/STATUS	/INVALID	/SHUTDOWN
21	/SHUTDOWN	/FORCEOFF	/ONLINE
22	/ONLINE	FORCEON	C1-
23	C1-	C1-	GND
24	GND	GND	NC
25	NC	NC	VCC
26	VCC	VCC	V+
27	V+	V+	NC
28	C1+	C1+	C1+
29	C2+	C2+	C2+
30	C2-	C2-	NC
31	V-	V-	C2-
32	NC	NC	V-



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