

- Analog Signal Chain
- Power Management
- Embedded Processors

# Devices To Design

## Power Management

### TPL910Q

Available in DFN3X3-8

## LDO Linear Regulator

### 1A Output, High-PSRR, Low Noise

#### Features:

- AEC-Q100 Automotive Grade 1 Qualified,  $T_A$ :  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Junction Temperature,  $T_J$ :  $-40^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Input Voltage Range: 2.2V to 5.5V
- Adjustable Output Voltage: 0.8V to 5V, 1A Maximum Output Current
- Low Dropout Voltage: 500mV Maximum at 1A
- 4.9 $\mu\text{VRMS}$  Output Voltage Noise
- $\pm 2\%$  Accuracy Over Line Regulation, Load Regulation, Operating Temp Range
- High PSRR: 78dB at 1 kHz 51dB at 100kHz
- Excellent Transient Response
- Over-Current and Over-Temperature Protection



#### Applications:

- Automotive RF Power Supply
- Automotive Telematics Power Supply
- Automotive ECU Power Supply

**Related Parts:** TPL910X

[TPL910Q Quick Links](#)

[Product Page](#) | [Datasheet](#) | [Buy on DigiKey](#)

Available in SOT23-5 & SC70-5

### TPA5581

Analog Signal Chain - Amplifiers

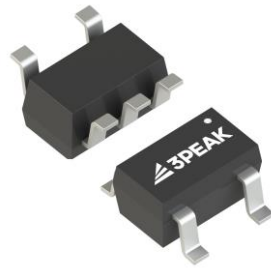
#### Applications:

- Server PSU
- Battery Current Sensing
- Precision Signal Condition
- Power System
- Temperature Transmitter
- Medical Instrumentation

**Related Parts:** TPA8852 (2 channel)

[TPA5581 Quick Links](#)

[Product Page](#) | [Datasheet](#) | [Buy on DigiKey](#)



## Precision Op Amp

### Low Noise, Zero-Drift, RRIO, 15-MHz GBP

#### Features:

- Low Offset Voltage:  $\pm 20 \mu\text{V}$  Maximum
- Zero Drift:  $\pm 0.01 \mu\text{V}/^{\circ}\text{C}$
- Gain Bandwidth Product: 15 MHz
- Low Noise: 10 nV/ $\sqrt{\text{Hz}}$  at 1 kHz, No 1/f noise: 0.2-uVPP (0.1 Hz to 10 Hz)
- Slew Rate: 4.9 V/ $\mu\text{s}$
- Supply Voltage: 2.7 V to 5.5 V
- Dual Supply:  $\pm 1.35 \text{ V}$  to  $\pm 2.75 \text{ V}$
- Rail-to-Rail Input and Output
- PSRR 110-dB
- THD: 0.0007%

Analog Signal Chain - Amplifiers

### TPA8001

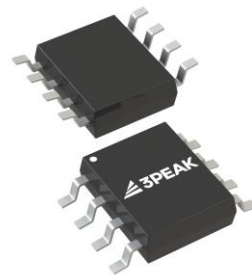
Available in WSOP8

## Precision Isolated Amplifier

### Capacitive SiO2 Insulation & CMTI 100kV/us

#### Features:

- AEC-Q100 Automotive Grade Qualified
- Input Voltage Range:  $\pm 250 \text{ mV}$  or  $\pm 50 \text{ mV}$
- Fixed Gain: 8.0, 8.2 or 41
- Low Gain Error: 0.3% Maximum at  $25^{\circ}\text{C}$
- Wide Temperature Range:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Finished Safety-Related Certifications: 5000-VRMS Isolation Rating per UL 1577, CQC Certification per GB 4943.1, CB Certifications
- Ongoing Safety-Related Certifications: VDE Certification according to DIN VDE V 0884-17 (IEC60747-17), CSA, TUV Certifications



#### Applications:

- Motor Control
- Industrial Automation
- Power Supplies

**Related Parts:** TPA8000, TPA8002

[TPA8001 Quick Links](#)

[Product Page](#) | [Datasheet](#) | [Buy on DigiKey](#)

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# Devices To Design

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Analog Signal Chain – Converter

## 4-Channel $\pm$ Output VDAC, IDAC EML Monitor and Controller

### Features:

- 4-Channel 12-Bit Voltage Output DAC
- Positive and Negative Output Range
- 4-Channel 12-Bit Current Output DAC
- 200-mA Output Range
- 4 External Inputs
- VDAC Current Monitor
- I2C with 4 Slave Addresses
- 4 Wire SPI
- Temperature Range: -40°C to +125°C
- Gain Error  $\pm$ 0.5% (MAX)

**TPAFEA008**

Available in WLCSP

### Applications:

- High-Speed Optical Module

### Related Parts:

- TPAFE0808



TPAFEA008 Quick Links

[Product Page](#) | [Datasheet](#)

Available in DFN3X3-8,SOP8

### Applications:

- Automotive and Transportation
- Body Electronics / Lighting
- Power Train / Chassis
- Power System
- Infotainment / Cluster
- ADAS / Safety

**TPT1021Q**

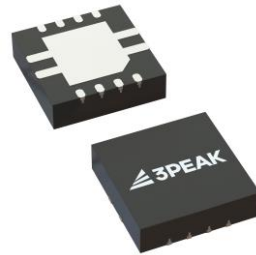
Analog Signal Chain - Interface

## LIN Transceiver

### Automotive Fault Protected with WAKE & INH

### Features:

- AEC-Q100 Automotive Grade 1 Qualified
- Compliant to LIN 2.0, 2.1, 2.2, 2.2A & ISO 17987-4 EPL Specifications
- Compliant to SAE J2602 LIN Network for Vehicle Applications
- Supports LIN Data Rates up to 20 Kbps
- Wide VBAT Input Voltage Range Supports 5.5 V to 40 V
- Low-current Standby Mode, Sleep Mode with Bus & Local Wake-up Capability
- Input Levels Compatible with 3.3 V and 5 V MCU Interface
- Ideal Passive Behavior to LIN Bus when Unpowered
- Integrated Pull-up Resistor for LIN Slave Applications
- Protection Features: Bus pin IEC 61000-4-2 ESD Protection  $\pm$ 15 kV Bus Fault Tolerant:  $\pm$ 45 V, VBAT Undervoltage Protection, TXD Dominant Time-out



TPT1021Q Quick Links

[Product Page](#) | [Datasheet](#) | [Buy on DigiKey](#)

Analog Signal Chain - Interface

## Hall Sensor Signal Conditioning High Accuracy, Low Temp Drift, Low 1/f Noise

### Features:

- Accuracy: 0.2% (max)
- Temp Drift: 50ppm (max)
- Offset and Drift: 100 $\mu$ V and 2 $\mu$ V/°C (Max)
- Reduce HALL Sensor Offset and Drift
- Pin Selectable for 2.5V, 1.65V, and Ratio Metric
- H-Bridge Drive Capability: 350 mA
- Bandwidth: 200kHz
- Overrange and Error Flags
- Supply Voltage: 2.7 V to 5.5 V

**TPAFE411**

Available in 20-QFN (4x4)

### Applications:

- Motor Control
- Industrial Automation
- Power Supplies

**Related Parts:** TPA8000, TPA8002



TPAFE411 Quick Links

[Product Page](#) | [Datasheet](#) | [Buy on DigiKey](#)

## 3PEAK 2024 Product Newsletter Part Summary:

Part Series	Product Description	Package	Quality Grade	Datasheet	Buy On DigiKey
<b>TPA191</b>	Current Sensing Amplifier	SOT363	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPL8032</b>	Linear Voltage Regulator IC Fixed Output	SOT23-5	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPL910Q</b>	Linear Voltage Regulator IC Positive Adjustable 1A Output	DFN3X3-8	Automobile	<a href="#">Link</a>	Available soon!
<b>TPR50</b>	Low-Drift Precision Fixed Voltage Reference	SOP8	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPA8001</b>	Isolated Amplifier	WSOP8	Automobile	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPA9151</b>	Difference Amplifier	SOP8	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPAFE411</b>	Hall Sensor Signal Conditioning	QFN4X4-20	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPC5180</b>	18 Bit 300KSPS Analog to Digital Converter 8 Input SAR	MSOP10	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPQ05100</b>	Step-Up Synchronous Regulator	WLCSP	Industrial	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPT1021Q</b>	High-Speed LIN Transceiver IC, 40V LIN BUS	SOP8	Automobile	<a href="#">Link</a>	<a href="#">Link</a>
<b>TPA5582</b>	Precision Operational Amplifier, 2 Circuit	MSOP8	Industrial	<a href="#">Link</a>	<a href="#">Link</a>