



MAX16984EVKIT

Evaluation Kit for the MAX16984



NDA Required. [Request Full Data Sheet](#)

Description

The MAX16984 evaluation kit (EV kit) demonstrates the MAX16984 automotive high-current step-down converter with USB protection/host charger adapter emulator.

The device features integrated host-charger port-detection circuitry adhering to the USB 2.0 BC1.2 battery charging specification and also features circuitry for Apple® iPod®/ iPhone® 1.0A and iPad® 2.1A dedicated charging modes.

The device integrates high-side current sensing and voltage-adjustment circuitry that provides automatic USB voltage adjustment to compensate for voltage drops in captive cables associated with automotive applications.

The device's step-down DC-DC converter operates from a voltage of up to 28V continuous and is protected from load-dump transients up to 42V. The converter is resistorprogrammable for 220kHz to 2.2MHz frequencies and can deliver 2.1A continuously.

The EV kit is configured for 2.2MHz operation, and the included 3-meter USB cable allows for demonstration of the cable-compensation capability of the device. This EV kit has been tuned for optimal eye quality at the end of the supplied USB cable; this tuning method is referred to as far-eye tuning. The USB 2.0 Hi-Speed eye diagram for this EV kit is shown in Figure 1.

The EV kit serves as a basic reference diagram for designs using the MAX16984. Component selection and layout should be closely followed to ensure optimal application performance. For additional support or design assistance, contact factory.

Key Features

- Configurable Charge-Detection Modes
 - o USB-IF BC1.2 CDP, DCP
 - o Apple 2.1A, 1.0A

- o China YD/T1591-2009 Charging Specification
- Automatic USB Voltage Adjustment by Integrated DC-DC Converter (220kHz to 2.2MHz)
- Proven PCB Layout
- Fully Assembled and Test

Applications/Uses

- Automotive Connectivity
- Automotive Radio and Navigation
- Dedicated USB Power Charger
- Telematics
- USB Port for Host and Hub Applications

Device	Fab Process	Technology	Sample size	Rejects	FIT at 25°C	FIT at 55°C
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Note : The failure rates are summarized by technology and mapped to the associated material part numbers. The failure rates are highly dependent on the number of units tested.

Key:  Material Analysis  Non Cancellable Non Reschedulable **NLA**=No longer available

Symbols in part number: **+** Lead-free, RoHS compliant **-** Not qualified as lead-free RoHS **#** RoHS compliant, lead exemption

***PRICE/UNIT shows budgetary pricing for 1K units. Some parts do not have standard pricing and require a quote.**

Part Number	Price /Unit*	Status	Carrier Type
MAX16984EVKIT#		Active	Box