



# MAX20044EVKIT

## Evaluation Kit for the

## MAX20042F/MAX20043F/MAX20044F



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

### **Description**

The MAX20044F evaluation kit (EV kit) circuit demonstrates the MAX20044F automotive USB protector switch IC, featuring overvoltage protection (OVP), electrostatic discharge (ESD) protection, and undervoltage lockout (UVLO)/overcurrent protection (OCP) for automotive USB applications.

The IC protects the USB BUS, D+, and D- data lines from overvoltage conditions, such as a short-to-battery and ESD events. UVLO protects the BUS against low-voltage conditions such as a short-to-ground. The BUS OCP uses a blanking period allowing momentary BUS shorts to be ignored. All faults can be monitored using the active-low FAULT output signal.

The IC can pass high-speed USB differential (D+ and D-) signals up to 480Mbps and has a low  $90\text{m}\Omega$   $R_{\text{ON}(\text{MAX})}$  for the BUS and a  $4\Omega$   $R_{\text{ON}(\text{TYP})}$  for the D+ and D- lines. The EV kit is powered by the USB BUS. An onboard MAX15007A automotive regulator provides the IN reference voltage. The MAX20044F EV kit can also evaluate the MAX20042F and MAX20043F after IC replacement of U1.

### **Key Features**

- Protects USB BUS, D+, and D- Signals from Overvoltages Up to 18V and ESD Events
- USB BUS Undervoltage Lockout
- 1.3A (typ) USB BUS Overcurrent-Protection Threshold
- 1ms Overcurrent Blanking Time
- Passes 480Mbps USB Data Signals
- Low On-Resistance
  - BUS:  $0.14\text{m}\Omega$  (max)
  - D+ and D-:  $4\Omega$  (typ)
- Active-Low FAULT Output Signal



- USB Powered
- Fully Assembled and Tested
- Evaluates the MAX20042F, MAX20043F, and MAX20044F ICs in a 16-Pin QSOP Package

### Applications/Uses

- Automotive USB Protection

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
MAX20044EVKIT#		Active	Box