

# FSA8009

## Audio Jack Send / End Detection with MIC / Video Switch

### Features

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| Detection             | Accessory Plug-In<br>3- or 4-Pole Audio Jack<br>Send / End Key Pressed |
| Switch Type           | Microphone & Video                                                     |
| V <sub>DD</sub>       | 2.5 to 4.3 V                                                           |
| THD (MIC)             | 0.01% Typical                                                          |
| ESD (Air Gap)         | 16 kV                                                                  |
| Operating Temperature | -40°C to 85°C                                                          |
| Package               | 10-Lead UMLP<br>1.4x1.8x0.5 mm, 0.4 mm<br>Pitch                        |
| Top Mark              | KP                                                                     |
| Ordering Information  | FSA8009UMX                                                             |

### Applications

- 3.5 mm and 2.5 mm Audio Jacks
- Cellular Phones, Smartphones
- MP3 and PMP

### Typical Application

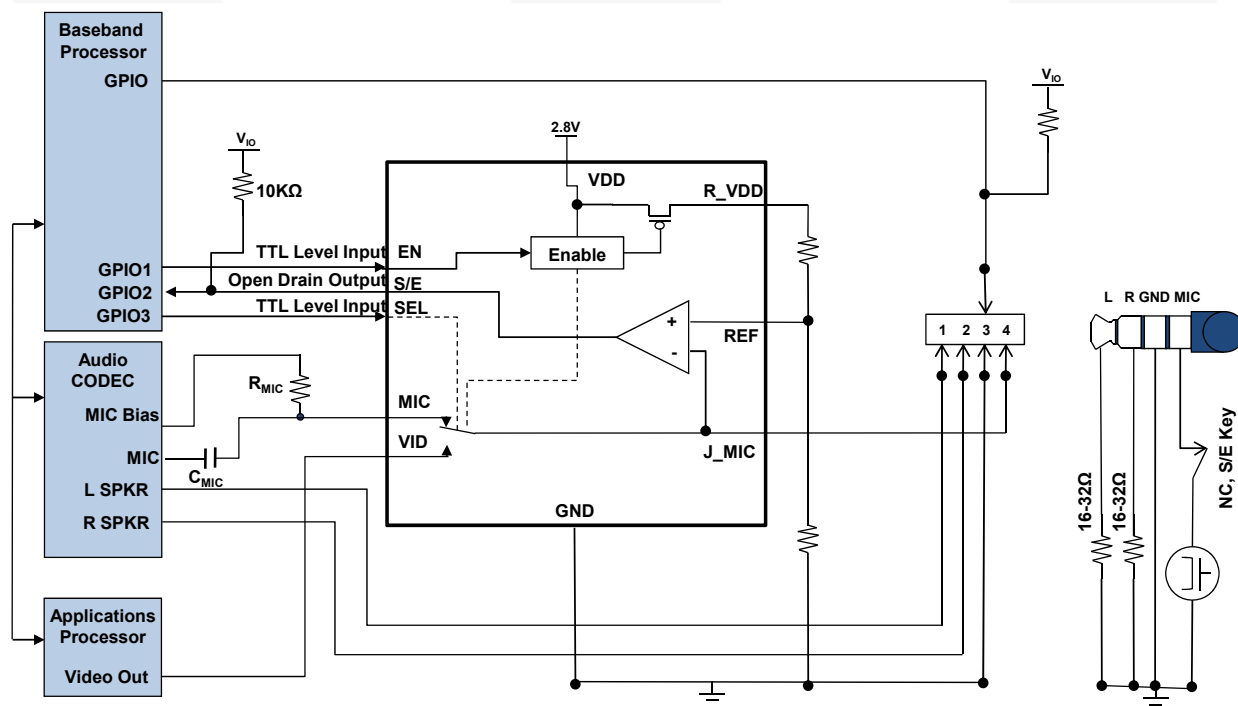


Figure 1. Mobile Phone Example

### Description

The FSA8009 is an audio jack microphone / video switch for 3- or 4-pole accessories with send / end (S/E) detection. In addition to detection, the FSA8009 features an integrated microphone / video switch that allows the processor to configure the audio jack. The architecture is designed to allow common third-party headphones to be used for listening to music from mobile handsets, personal media players, and portable peripheral devices.

- Determines When Send / End Button Key is Pressed
- Integrates a MIC / Video Switch for 4-Pole Configuration
- Reduces Pop / Click Caused by Microphone Bias

### Related Resources

- For samples and questions, please contact:  
[Analog.Switch@fairchildsemi.com](mailto:Analog.Switch@fairchildsemi.com).
- FSA8009 Demonstration Board

## Pin Descriptions

| Name  | Pin # | Type   | Description                                                                                                                 |
|-------|-------|--------|-----------------------------------------------------------------------------------------------------------------------------|
| R_VDD | 1     | Output | Optional pull-up voltage, with a resistor divider, sets the reference voltage on the REF pin                                |
| EN    | 2     | Input  | Device enable, low-power mode                                                                                               |
| SEL   | 3     | Input  | MIC / VID switch select pin                                                                                                 |
| S/E   | 4     | Output | Indicates state of send /end key press, open-drain output requires pull-up resistor                                         |
| VID   | 6     | Switch | Video switch path; connects between video source and audio jack microphone pin                                              |
| VDD   | 5     | Power  | Supply voltage                                                                                                              |
| MIC   | 7     | Switch | Microphone switch path that goes to the CODEC microphone amplifier input                                                    |
| J_MIC | 8     | Switch | Microphone switch path that connects to the microphone, SEND/END key, and jack pole video                                   |
| REF   | 10    | Input  | Reference voltage used to detect a send / end key press, through a resistor divider off R_VDD or external voltage reference |
| GND   | 9     | Ground | Ground for both the audio jack and the PCB                                                                                  |

### Note:

1. 0 =  $V_{OL}$  or  $V_{IL}$ ; 1 =  $V_{OH}$  or  $V_{IH}$ .

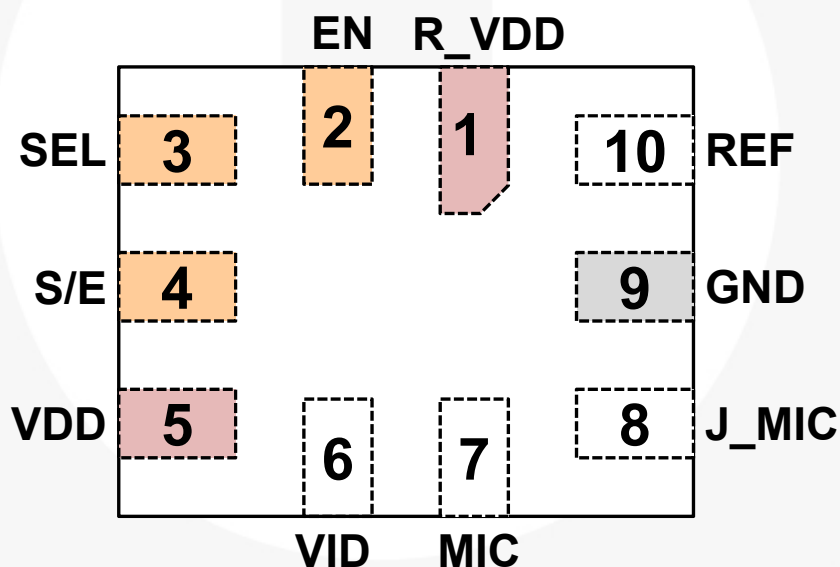


Figure 2. UMLP Pin Assignment (Through View)

Table 1. Device Configuration in Reset and Active States

| EN | SEL | MIC     | VID     | R_VDD | S/E    |
|----|-----|---------|---------|-------|--------|
| 0  | X   | 3-State | 3-State | GND   | HIGH   |
| 1  | 1   | J_MIC   | Open    | VDD   | Active |
| 1  | 0   | Open    | J_MIC   | GND   | LOW    |

## Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only.

| Symbol    | Parameter                                      |                                         | Min. | Max.         | Units |
|-----------|------------------------------------------------|-----------------------------------------|------|--------------|-------|
| $V_{DD}$  | Supply Voltage from Battery                    |                                         | -0.5 | 5.5          | V     |
| $V_{SW}$  | Switch I/O Voltage                             |                                         | -0.5 | $V_{DD}+0.5$ | V     |
| $I_{IK}$  | Input Clamp Diode Current <sup>(2)</sup>       |                                         | -50  |              | mA    |
| $I_{SW}$  | Switch I/O Current (Continuous) <sup>(2)</sup> |                                         |      | 50           | mA    |
| $T_{STG}$ | Storage Temperature Range                      |                                         | -65  | +150         | °C    |
| $T_J$     | Maximum Junction Temperature                   |                                         |      | +150         | °C    |
| $T_L$     | Lead Temperature (Soldering, 10 Seconds)       |                                         |      | +260         | °C    |
| ESD       | IEC 61000-4-2 System                           | Air Gap                                 | 16   |              | kV    |
|           |                                                | Contact                                 | 10   |              |       |
|           | Human Body Model, JEDEC JESD22-A114            | All other Pins                          | 6    |              |       |
|           |                                                | J_DET, J_MIC, $V_{DD}$ , $V_{IO}$ , GND | 8    |              |       |
|           | Charged Device Model, JEDEC JESD22-C101        | All Pins                                | 2    |              |       |

**Note:**

2. The input and output negative ratings may be exceeded if the input and output diode current ratings are observed.

## Recommended Operating Conditions

The Recommended Operating Conditions table defines the conditions for actual device operation. Recommended operating conditions are specified to ensure optimal performance to the datasheet specifications. Fairchild does not recommend exceeding them or designing to Absolute Maximum Ratings.

| Symbol   | Parameter              | Min. | Max. | Units |
|----------|------------------------|------|------|-------|
| $V_{DD}$ | Battery Supply Voltage | 2.5  | 4.3  | V     |
| $T_A$    | Operating Temperature  | -40  | +85  | °C    |

## DC Electrical Characteristics

All typical values are at  $T_A=25^{\circ}\text{C}$  unless otherwise specified.

### MIC Switch

| Symbol         | Parameter                            | $V_{DD}$ (V) | Conditions                                                 | $T_A = -40 \text{ to } +85^{\circ}\text{C}$ |      |          | Units    |
|----------------|--------------------------------------|--------------|------------------------------------------------------------|---------------------------------------------|------|----------|----------|
|                |                                      |              |                                                            | Min.                                        | Typ. | Max.     |          |
| $R_{ON}$       | MIC Switch On Resistance             | 2.8          | $I_{OUT} = 24 \text{ mA}, V_{IN} = 2.2 \text{ V}$          |                                             | 2.0  | 4.0      | $\Omega$ |
|                |                                      | 3.0          |                                                            |                                             | 1.5  | 3.5      |          |
|                |                                      | 3.3          |                                                            |                                             | 1.2  | 3.0      |          |
|                |                                      | 3.8          |                                                            |                                             | 1.0  | 2.5      |          |
| $R_{FLAT(ON)}$ | On Resistance Flatness               | 2.8          | $I_{OUT} = 24 \text{ mA}, V_{IN} = 1 \text{ V to } V_{DD}$ |                                             | 0.7  | 1.5      | $\Omega$ |
|                |                                      | 3.0          |                                                            |                                             | 0.6  | 1.4      |          |
|                |                                      | 3.3          |                                                            |                                             | 0.5  | 1.3      |          |
|                |                                      | 3.8          |                                                            |                                             | 0.5  | 1.2      |          |
| $V_{IN}$       | Switch Input Voltage Range           | 2.5 to 4.3   |                                                            | 0                                           |      | $V_{DD}$ | V        |
| $C_{ON}$       | MIC and J_MIC Switch ON Capacitance  | 2.8          | $f = 1 \text{ MHz}$                                        |                                             | 15   |          | pF       |
| $C_{OFF}$      | MIC and J_MIC Switch OFF Capacitance | 2.8          | $f = 1 \text{ MHz}$                                        |                                             | 8    |          | pF       |

### Video Switch Characteristics

| Symbol         | Parameter                  | $V_{DD}$ (V) | Conditions                                                        | $T_A = -40 \text{ to } +85^{\circ}\text{C}$ |      |      | Unit     |
|----------------|----------------------------|--------------|-------------------------------------------------------------------|---------------------------------------------|------|------|----------|
|                |                            |              |                                                                   | Min.                                        | Typ. | Max. |          |
| $R_{ON}$       | MIC Switch On Resistance   | 2.8          | $I_{OUT} = 24 \text{ mA}, V_{IN} = 0.5 \text{ V}$                 |                                             | 1.0  | 1.5  | $\Omega$ |
|                |                            | 3.0          |                                                                   |                                             | 0.9  | 1.4  |          |
|                |                            | 3.3          |                                                                   |                                             | 0.8  | 1.3  |          |
|                |                            | 3.8          |                                                                   |                                             | 0.7  | 1.2  |          |
| $R_{FLAT(ON)}$ | On Resistance Flatness     | 2.8          | $I_{OUT} = 24 \text{ mA}, V_{IN} = 0 \text{ V to } 1.2 \text{ V}$ |                                             | 0.4  | 0.60 | $\Omega$ |
|                |                            | 3.0          |                                                                   |                                             | 0.3  | 0.55 |          |
|                |                            | 3.3          |                                                                   |                                             | 0.2  | 0.50 |          |
|                |                            | 3.8          |                                                                   |                                             | 0.15 | 0.45 |          |
| $V_{IN}$       | Switch Input Voltage Range | 2.5 to 4.3   |                                                                   | 0                                           |      | 1.5  | V        |
| $C_{ON}$       | VID Switch ON Capacitance  | 2.8          | $f = 1 \text{ MHz}$                                               |                                             | 40   |      | pF       |
| $C_{OFF}$      | VID Switch OFF Capacitance | 2.8          | $f = 1 \text{ MHz}$                                               |                                             | 10   |      | pF       |

### Parallel I/O

| Symbol      | Parameter                                                           | $T_A = -40 \text{ to } +85^{\circ}\text{C}$ |      |                      | Unit       |
|-------------|---------------------------------------------------------------------|---------------------------------------------|------|----------------------|------------|
|             |                                                                     | Min.                                        | Typ. | Max.                 |            |
| $V_{IH}$    | Input High Voltage (EN, SEL)                                        | $0.44 \times V_{DD}$                        |      | $V_{DD}$             | V          |
| $V_{IL}$    | Input Low Voltage (EN, SEL)                                         | GND                                         |      | $0.15 \times V_{DD}$ | V          |
| $PUR_{S/E}$ | Pull-Up Resistor on S/E                                             | 2                                           |      | 110                  | K $\Omega$ |
| $V_{OL}$    | Output Low Voltage (S/E) ( $V_{PUR}$ = Voltage of Pull-Up Resistor) |                                             |      | $0.2 \times V_{PUR}$ | V          |

**DC Electrical Characteristics** (Continued)

All typical values are at  $T_A=25^{\circ}\text{C}$  unless otherwise specified.

**Comparator NC Switch**

| Symbol      | Parameter                             | $V_{DD}$ (V) | Conditions | $T_A = -40$ to $+85^{\circ}\text{C}$ |      |                  | Unit |
|-------------|---------------------------------------|--------------|------------|--------------------------------------|------|------------------|------|
|             |                                       |              |            | Min.                                 | Typ. | Max.             |      |
| $V_{REF}$   | Input Voltage on REF Pin              |              |            | 1                                    |      | $V_{DD} - 0.075$ | V    |
| $COM_{HYS}$ | Hysteresis of Comparator "-" Terminal |              |            |                                      | 50   |                  | mV   |

**Current**

| Symbol       | Parameter                      | $V_{DD}$ (V) | Conditions                                                                        | $T_A = -40$ to $+85^{\circ}\text{C}$ |      |      | Unit          |
|--------------|--------------------------------|--------------|-----------------------------------------------------------------------------------|--------------------------------------|------|------|---------------|
|              |                                |              |                                                                                   | Min.                                 | Typ. | Max. |               |
| $I_{OFF}$    | Off-State Leakage Current      | 4.3          | $J_{MIC} = 1\text{ V}, 4.3\text{ V}$<br>$MIC$ or $VID = 4.3\text{ V}, 1\text{ V}$ | -15                                  |      | 15   | nA            |
| $I_{IN}$     | Input Leakage Current          | 0 to 4.3     | Inputs 0 to 4.3 V                                                                 |                                      |      | 1    | $\mu\text{A}$ |
| $I_{CC-EN}$  | Low-Power Mode                 | 2.5 to 4.3   | EN = LOW                                                                          |                                      | 10   |      | nA            |
| $I_{CC-VID}$ | Current during Video Mode      | 2.5 to 4.3   | Active Current<br>(EN = HIGH, SEL = LOW)                                          |                                      | 10   |      | nA            |
| $I_{CC-MIC}$ | Current during Microphone Mode | 2.5 to 4.3   | Active Current<br>(EN = HIGH, SEL = HIGH)                                         |                                      | 20   |      | $\mu\text{A}$ |

## AC Electrical Characteristics

All typical values are for  $V_{CC}=3.3$  V at  $T_A=25^{\circ}\text{C}$  unless otherwise specified.

### MIC Switch

| Symbol     | Parameter                 | $V_{DD}$ (V) | Conditions                                                                                                           | $T_A = -40$ to $+85^{\circ}\text{C}$ |      |      | Unit |
|------------|---------------------------|--------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------|------|------|------|
|            |                           |              |                                                                                                                      | Min.                                 | Typ. | Max. |      |
| THD        | Total Harmonic Distortion | 2.8          | $R_T = 600\ \Omega$ , $V_{SW} = 0.5\ V_{PP}$ ,<br>$f = 20\ \text{Hz}$ to $20\ \text{kHz}$ , $V_{IN} = 2.2\ \text{V}$ |                                      | .003 |      | %    |
| $O_{IRR}$  | Off Isolation             | 2.8          | $f = 20\ \text{kHz}$ , $R_S=32\ \Omega$ , $C_L=0\ \text{pF}$ ,<br>$R_T=32\ \Omega$                                   |                                      | -100 |      | dB   |
| $X_{TALK}$ | Crosstalk from MIC to VID | 2.8          | $f = 100\ \text{MHz}$ , $R_L=100\ \Omega$                                                                            |                                      | -67  |      | dB   |

### Video Switch Characteristics

| Symbol     | Parameter                 | $V_{DD}$ (V) | Conditions                                                                             | $T_A = -40$ to $+85^{\circ}\text{C}$ |      |      | Unit |
|------------|---------------------------|--------------|----------------------------------------------------------------------------------------|--------------------------------------|------|------|------|
|            |                           |              |                                                                                        | Min.                                 | Typ. | Max. |      |
| $D_G$      | Differential Gain         | 2.8          | $R_L = 150\ \Omega$ , $f = 3.58\ \text{MHz}$                                           |                                      | .09  |      | %    |
| $D_P$      | Differential Phase        | 2.8          | $R_L = 150\ \Omega$ , $f = 3.58\ \text{MHz}$                                           |                                      | .13  |      | °    |
| $O_{IRR}$  | Off Isolation             | 2.8          | $f=10\ \text{MHz}$ , $R_L=150\ \Omega$ ,                                               |                                      | -45  |      | dB   |
| $X_{TALK}$ | Crosstalk from VID to MIC | 2.8          | $f=10\ \text{MHz}$ , $R_{IN} = 10\ \Omega$ , $C_L=0\ \text{pF}$ ,<br>$R_L=150\ \Omega$ |                                      | -65  |      | dB   |

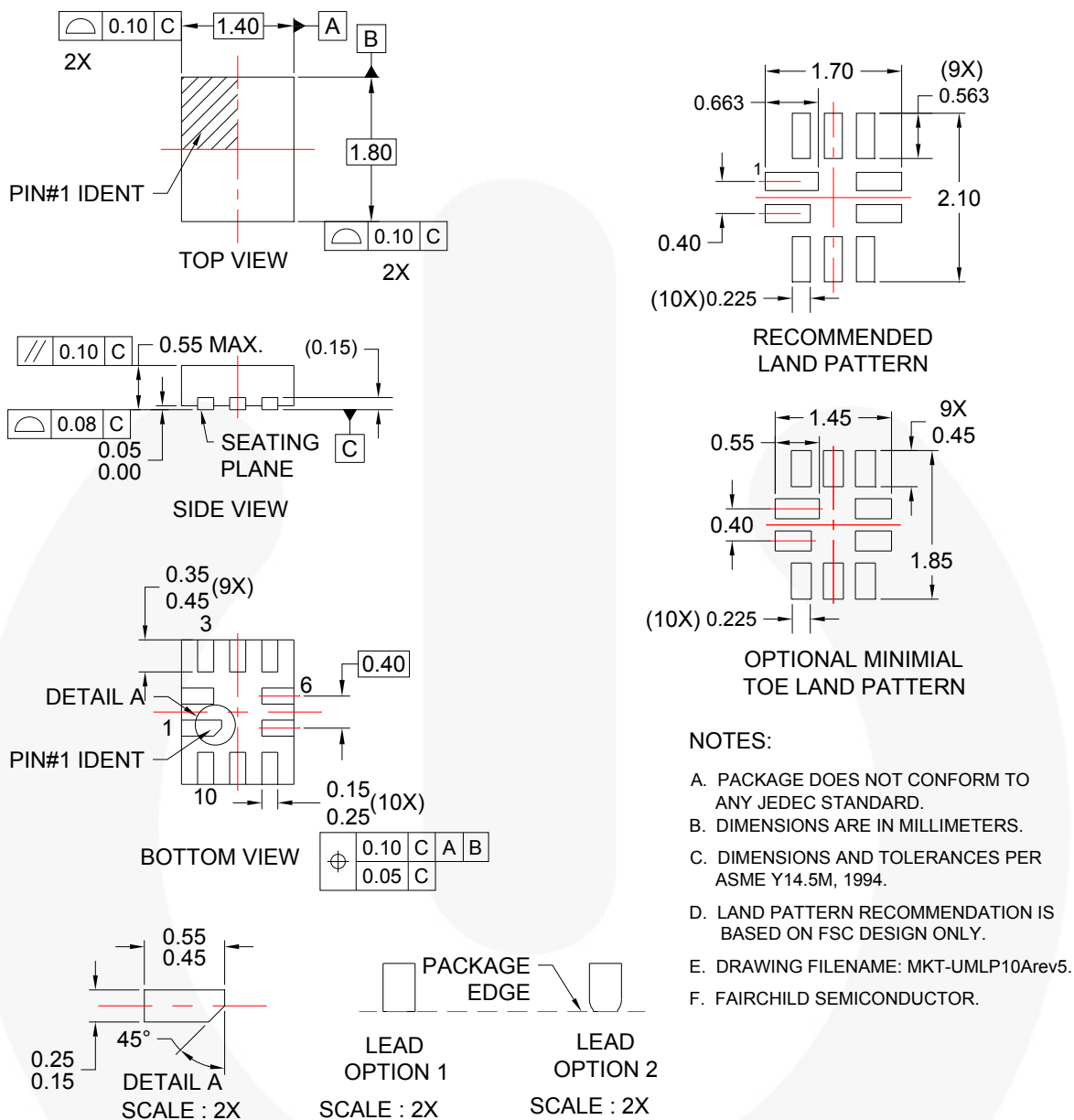
### Parallel I/O

| Symbol            | Parameter                                                     | $V_{DD}$ (V) | Conditions                                                                               | $T_A = -40$ to $+85^{\circ}\text{C}$ |      |      | Unit          |
|-------------------|---------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------|--------------------------------------|------|------|---------------|
|                   |                                                               |              |                                                                                          | Min.                                 | Typ. | Max. |               |
| $t_{BBM}$         | Break-Before-Make Time                                        | 2.5 to 4.3   |                                                                                          |                                      | 120  |      | ns            |
| $t_{EN}$          | Enable or Disable Time                                        | 2.5 to 4.3   | EN LOW $\rightarrow$ HIGH or EN<br>HIGH $\rightarrow$ LOW                                |                                      | 15   |      | $\mu\text{s}$ |
| $t_{SEL-COM-ON}$  | Select to Comparator On                                       | 2.5 to 4.3   | SEL LOW $\rightarrow$ HIGH to Comparator<br>ON                                           |                                      | 10   |      | $\mu\text{s}$ |
| $t_{SEL-COM-OFF}$ | Select to Comparator Off                                      | 2.5 to 4.3   | SEL HIGH $\rightarrow$ LOW to Comparator<br>OFF                                          |                                      | 20   |      | ns            |
| $t_{ON}$          | Switch Turn-On Time                                           | 2.5 to 4.3   |                                                                                          |                                      | 40   |      | ns            |
| $t_{OFF}$         | Switch Turn-Off Time                                          | 2.5 to 4.3   |                                                                                          |                                      | 15   |      | ns            |
| $t_{J\_MIC-S/E}$  | Propagation Delay from<br>Comparator Trigger to S/E<br>Output | 2.5 to 4.3   | $J\_MIC > REF$ from LOW $\rightarrow$ HIGH<br>$J\_MIC < REF$ from HIGH $\rightarrow$ LOW |                                      | 10   |      | $\mu\text{s}$ |

### Power

| Symbol | Parameter                    | $V_{DD}$ (V) | Conditions                                                                       | $T_A = -40$ to $+85^{\circ}\text{C}$ |      |      | Unit |
|--------|------------------------------|--------------|----------------------------------------------------------------------------------|--------------------------------------|------|------|------|
|        |                              |              |                                                                                  | Min.                                 | Typ. | Max. |      |
| PSRR   | Power Supply Rejection Ratio | 2.8          | Power Supply Noise 300 mV <sub>PP</sub> ,<br>Measured 10/90%, $f=217\ \text{Hz}$ |                                      | -100 |      | dB   |

## Physical Dimensions



**Figure 3. 10-Lead UMLP Package Drawing**

Package drawings are provided as a service to customers considering Fairchild components. Drawings may change in any manner without notice. Please note the revision and/or date on the drawing and contact a Fairchild Semiconductor representative to verify or obtain the most recent revision. Package specifications do not expand the terms of Fairchild's worldwide terms and conditions, specifically the warranty therein, which covers Fairchild products.

Always visit Fairchild Semiconductor's online packaging area for the most recent package drawings:  
<http://www.fairchildsemi.com/packaging/>.

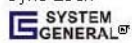
## Ordering Information

| Part Number | Operating Temperature Range | Top Mark | Package                                                                             |
|-------------|-----------------------------|----------|-------------------------------------------------------------------------------------|
| FSA8009UMX  | -40 to +85°C                | KP       | 10-Lead 1.4 x 1.8 x 0.55 mm, 0.4 mm Pitch, Ultrathin Molded Leadless Package (UMLP) |



## TRADEMARKS

The following includes registered and unregistered trademarks and service marks, owned by Fairchild Semiconductor and/or its global subsidiaries, and is not intended to be an exhaustive list of all such trademarks.

|                                                                                   |                                                |                                                                                   |                                                                                     |
|-----------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 2Cool™                                                                            | FPS™                                           |  | Sync-Lock™                                                                          |
| AccuPower™                                                                        | F-PFS™                                         |                                                                                   |  |
| AX-CAP®                                                                           | FRFET®                                         | PowerTrench®                                                                      | TinyBoost™                                                                          |
| BitSiC™                                                                           | Global Power Resource™                         | PowerXS™                                                                          | TinyBuck™                                                                           |
| Build it Now™                                                                     | GreenBridge™                                   | Programmable Active Droop™                                                        | TinyCalc™                                                                           |
| CorePLUS™                                                                         | Green FPST™                                    | QFET®                                                                             | TinyLogic®                                                                          |
| CorePOWER™                                                                        | Green FPST™ e-Series™                          | QST™                                                                              | TINYOPTO™                                                                           |
| CROSSVOLT™                                                                        | Gmax™                                          | Quiet Series™                                                                     | TinyPower™                                                                          |
| CTL™                                                                              | GTO™                                           | RapidConfigure™                                                                   | TinyPVM™                                                                            |
| Current Transfer Logic™                                                           | IntelliMAX™                                    |  | TinyWire™                                                                           |
| DEUXPEED®                                                                         | ISOPLANAR™                                     | Saving our world, 1mW/WkV at a time™                                              | TranSiC™                                                                            |
| Dual Cool™                                                                        | Making Small Speakers Sound Louder and Better™ | SignalVise™                                                                       | TriFault Detect™                                                                    |
| EcoSPARK®                                                                         | MegaBuck™                                      | SmartMax™                                                                         | TRUECURRENT®                                                                        |
| EfficientMax™                                                                     | MICROCOUPLER™                                  | SMART START™                                                                      | µSerDes™                                                                            |
| ESBC™                                                                             | MicroFET™                                      | Solutions for Your Success™                                                       |  |
|  | MicroPak™                                      | SPM®                                                                              | UHC®                                                                                |
| Fairchild®                                                                        | MicroPak2™                                     | STEALTH™                                                                          | Ultra FRFET™                                                                        |
| Fairchild Semiconductor®                                                          | MillerDrive™                                   | SuperFET®                                                                         | UniFET™                                                                             |
| FACT Quiet Series™                                                                | MotionMax™                                     | SuperSOT™-3                                                                       | VCX™                                                                                |
| FACT®                                                                             | mWSaver™                                       | SuperSOT™-6                                                                       | VisualMax™                                                                          |
| FAST®                                                                             | OptoHiT™                                       | SuperSOT™-8                                                                       | VoltagePlus™                                                                        |
| FastvCore™                                                                        | OPTOLOGIC®                                     | SupreMOS®                                                                         | XST™                                                                                |
| FETBench™                                                                         | OPTOPLANAR®                                    | SyncFET™                                                                          |                                                                                     |

\* Trademarks of System General Corporation, used under license by Fairchild Semiconductor.

## DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION, OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN, NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

## LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support, device, or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

## ANTI-COUNTERFEITING POLICY

Fairchild Semiconductor Corporation's Anti-Counterfeiting Policy. Fairchild's Anti-Counterfeiting Policy is also stated on our external website, [www.fairchildsemi.com](http://www.fairchildsemi.com), under Sales Support.

Counterfeiting of semiconductor parts is a growing problem in the industry. All manufacturers of semiconductor products are experiencing counterfeiting of their parts. Customers who inadvertently purchase counterfeit parts experience many problems such as loss of brand reputation, substandard performance, failed applications, and increased cost of production and manufacturing delays. Fairchild is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. Fairchild strongly encourages customers to purchase Fairchild parts either directly from Fairchild or from Authorized Fairchild Distributors who are listed by country on our web page cited above. Products customers buy either from Fairchild directly or from Authorized Fairchild Distributors are genuine parts, have full traceability, meet Fairchild's quality standards for handling and storage and provide access to Fairchild's full range of up-to-date technical and product information. Fairchild and our Authorized Distributors will stand behind all warranties and will appropriately address any warranty issues that may arise. Fairchild will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources. Fairchild is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

## PRODUCT STATUS DEFINITIONS

### Definition of Terms

| Datasheet Identification | Product Status        | Definition                                                                                                                                                                                          |
|--------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advance Information      | Formative / In Design | Datasheet contains the design specifications for product development. Specifications may change in any manner without notice.                                                                       |
| Preliminary              | First Production      | Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design. |
| No Identification Needed | Full Production       | Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.                                               |
| Obsolete                 | Not In Production     | Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.                                                    |

Rev. I64



# AMEYA360

Components Supply Platform

Authorized Distribution Brand :



Website :

Welcome to visit [www.ameya360.com](http://www.ameya360.com)

Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd  
Minhang District, Shanghai , China

➤ Sales :

Direct     +86 (21) 6401-6692  
  
Email       amall@ameya360.com  
  
QQ         800077892  
  
Skype      ameyasales1 ameyasales2

➤ Customer Service :

Email       service@ameya360.com

➤ Partnership :

Tel         +86 (21) 64016692-8333  
  
Email      mkt@ameya360.com