

DIO3222A

Low-Power, USB2.0 High-Speed Switch

Features

- V_{CC} operation at 2.7V to 4.3V
- Low Con: 6.5pF Typical
- Low Ron: 6Ω Typical
- Low Power Consumption: 1μA Maximum
- Low I_{CC}T : 15μA Maximum
@V_{IN}=1.8V, V_{CC}=3.6V
- -3dB Bandwidth: > 720MHz
- Packaged in Green
DQFN-10; MSOP-10 and QFN-10
- 8kV HBM ESD Rating
2kV CDM ESD Rating
- Power-Off/On Protection on Common port.
- D+/D- Pins Tolerate up to 5.25V

Applications

- Cell-Phone/PDA
- MP3/MP4/PMP
- STB/LCDTV

Descriptions

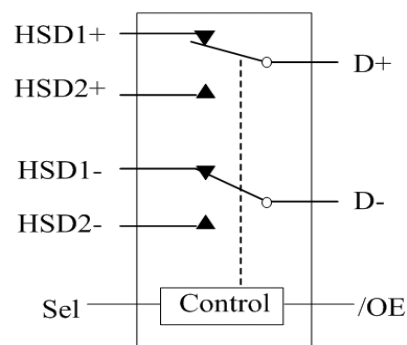
The DIO3222A is a low power, dual SPDT 2-port high-speed analog switch. It handles bi-directional signal flow and is optimized for switching a hi-speed (480Mbps) source or a full-speed (12Mbps) source.

DIO3222A has high channel-to-channel noise isolation and low bit-to-bit skew which allows it to pass high-speed differential signals with good signal integrity. Each switch offers little or no attenuation of the high-speed signals at the outputs.

The DIO3222A contains special circuitry on the D+/D- pins, which can tolerate up to 5.25V when the USB devices are either powered off or powered on.

DIO3222A is available in three type Green packages: DQFN-10, MSOP-10 and QFN-10.

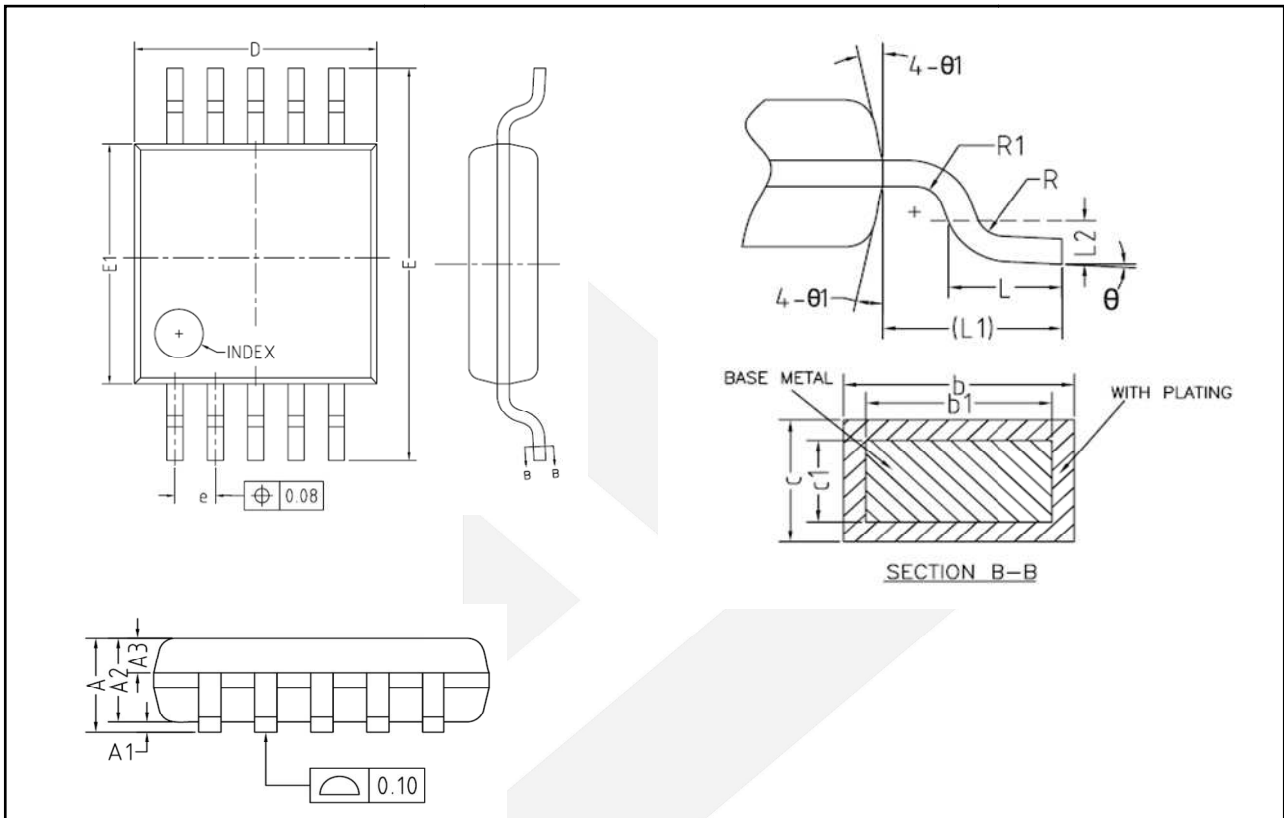
Block Diagram



Ordering Information

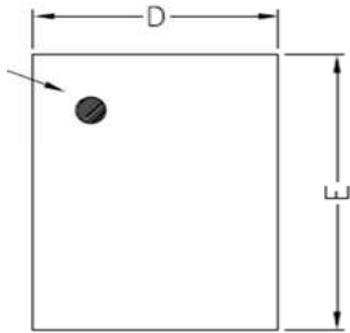
| Order Part Number | Top Marking | | T _A | | Package |
|-------------------|-------------|------------|----------------|---------|-------------------|
| DIO3222AMP10 | DIO3222 | Green/RoHS | -40 to +85°C | MSOP-10 | Tape & Reel, 3000 |
| DIO3222ALP10 | YWGZ | Green | -40 to +85°C | DQFN-10 | Tape & Reel, 3000 |
| DIO3222AQN10 | YWGZ | Green | -40 to +85°C | QFN-10 | Tape & Reel, 3000 |

Physical Dimensions: MSOP-10

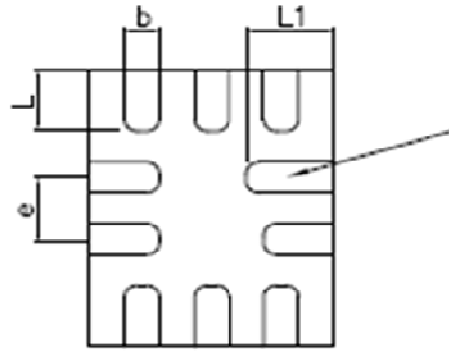


| Symbol | Min | Typ | Max |
|------------|---------|------|------|
| A | - | - | 1.10 |
| A1 | 0 | - | 0.15 |
| A2 | 0.75 | 0.85 | 0.95 |
| A3 | 0.25 | 0.35 | 0.39 |
| b | 0.18 | - | 0.27 |
| b1 | 0.17 | 0.20 | 0.23 |
| c | 0.15 | - | 0.20 |
| c1 | 0.14 | 0.15 | 0.16 |
| D | 2.90 | 3.00 | 3.10 |
| E | 4.70 | 4.90 | 5.10 |
| E1 | 2.90 | 3.00 | 3.10 |
| e | 0.40 | 0.50 | 0.60 |
| L | 0.40 | 0.60 | 0.80 |
| L1 | 0.95REF | | |
| L2 | 0.25BSC | | |
| R | 0.07 | - | - |
| R1 | 0.07 | - | - |
| θ | 0° | - | 8° |
| $\theta 1$ | 9° | 12° | 15° |

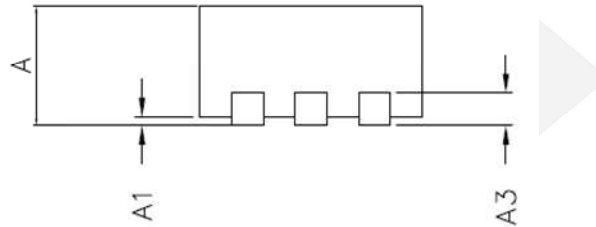
Physical Dimensions: DQFN-10



TOP VIEW

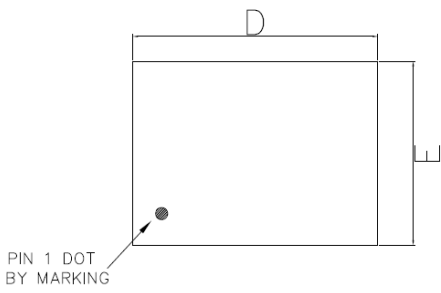


BOTTOM VIEW

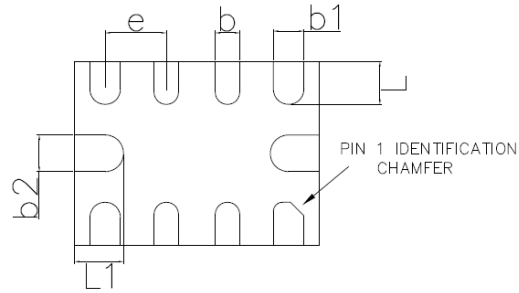


| COMMON DIMENSIONS(MM) | | | |
|-----------------------|---------------|------|------|
| PKG. | UT:ULTRA THIN | | |
| REF. | MIN. | NOM | MAX |
| A | 0.5 | 0.55 | 0.6 |
| A1 | 0 | | 0.05 |
| A3 | 0.15REF. | | |
| D | 1.35 | 1.4 | 1.45 |
| E | 1.75 | 1.8 | 1.85 |
| b | 0.15 | 0.2 | 0.25 |
| L | 0.3 | 0.4 | 0.5 |
| L1 | 0.4 | 0.5 | 0.6 |
| e | 0.4BSC | | |

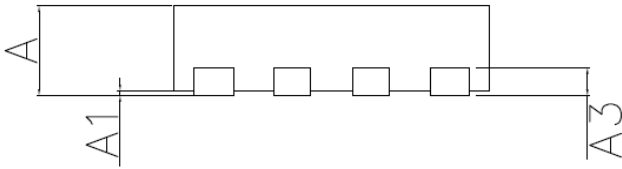
Physical Dimensions: QFN-10



TOP VIEW



BOTTOM VIEW



SIDE VIEW

| COMMON DIMENSIONS (UNITS OF MEASURE=MM) | | | |
|--|----------|------|------|
| Symbol | MIN | NOM | MAX |
| A | 0.50 | 0.55 | 0.60 |
| A1 | 0.00 | - | 0.05 |
| A3 | 0.15REF | | |
| D | 1.95 | 2.00 | 2.05 |
| E | 1.45 | 1.50 | 1.55 |
| b | 0.15 | 0.20 | 0.25 |
| b1 | 0.20 | 0.25 | 0.30 |
| b2 | 0.25 | 0.30 | 0.35 |
| L | 0.30 | 0.35 | 0.40 |
| L1 | 0.35 | 0.40 | 0.45 |
| e | 0.50 BSC | | |

