**8/2014**

# U232

## N-Channel Dual Silicon Junction Field-Effect Transistor

- **Differencial Amplifier**
- **Low & Maximum Frequency Amplifier**

**Absolute maximum ratings at $T_A = 25^oC$**

| | |
|---|---|
| Reverse Gate Source & Gate Drain Voltage | -50V |
| Continuous Forward Gate Current | 50 mA |
| Continuous Device Power Dissipation | 300 mW |
| Power Derating | 1.7 mW/°C |
| Storage Temperature Range | -65°C to +150°C |

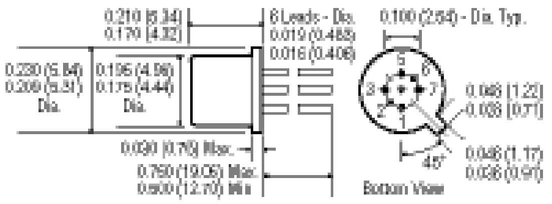
**At 25°C free air temperature**

| | | U232 | | | Process NJ16 | | |
|---|---|---|---|---|---|---|---|
| **Static Electrical Characteristics** | | **Min** | **Typ** | **Max** | **Unit** | **Test Conditions** | |
| Gate Source Breakdown Voltage | $V_{(BR)GSS}$ | -50 | | | V | $I_G = -1$ uA, $V_{DS} = 0$ V | |
| Gate Reverse Current | $I_{GSS}$ | | | -0.1 | nA | $V_{GS} = -10$ V, $V_{DS} = 0$ V | |
| Gate Source Cutoff Voltage | $V_{GS(OFF)}$ | -0.5 | | -4.5 | V | $V_{DS} = 10$ V, $V_{GS} = 0$ V | |
| Drain Saturation Current (pulsed) | $I_{DSS}$ | 0.5 | | 5 | mA | $V_{DS} = 10$ V, $V_{GS} = 0$ V | |

**Dynamic Electrical Characteristics**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Common-Source Forward Transconductance | $g_{fs}$ | 1 | | 3 | mS | $V_{DS} = 10$ V, VGS = 0 V | f = 1 kHz |
| Common-Source Input Capacitance | $C_{iss}$ | | | 6 | pF | $V_{DS} = 10$V, $I_D = 5$ mA | f = 1 MHz |
| Common-Source Reverse Transfer Capacitance | $C_{rss}$ | | | 2 | pF | $V_{DS} = 10$ V, $I_D = 5$ mA | f = 1 MHz |
| Equivalent Short Circuit Input Noise Voltage | $\sim e_N$ | | | 80 | nV/√Hz | $V_{DS} = 10$ V, $I_D = 5$ mA | f = 100 Hz |

| Matching Characteristics | | Min | Max | Units | Test Conditions |
|---|---|---|---|---|---|
| Differencial Gate-Source Voltage | (VGS1-VGS2) | | 10 | mV | VDS = 10 V, ID = -10 mA |
| Differencial Gate Source Voltage with Temperature | $\frac{\Delta\lvert VGS1-VGS2\rvert}{\Delta T}$ | | 25 | µV/°C | VDG = 10 V, ID = 30 µA |



**TO-71 Package**
Dimensions in Inches (mm)
**Pin Configuration**
1 Source, 2 Drain, 3 Gate,
5 Source, 6 Drain, 7 Gate

**Surface Mount Version**:
SMPU232

InterFET

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