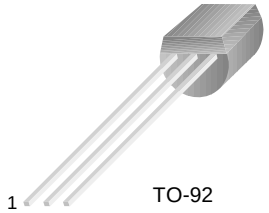
FAIRCHILD
SEMICONDUCTOR®

# FJN598J

## Capacitor Microphone Applications

- Especially Suited for use in Audio, Telephone Capacitor Microphones
- Excellent Voltage Characteristic
- Excellent Transient Characteristic




TO-92

1. Source 2. Gate 3. Drain

## Si N-channel Junction FET

### Absolute Maximum Ratings $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|---|---|---|---|
| $V_{GDO}$ | Gate-Drain Voltage | -20 | V |
| $I_G$ | Gate Current | 10 | mA |
| $I_D$ | Drain Current | 1 | mA |
| $P_D$ | Power Dissipation | 150 | mW |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | -55 ~ 150 | °C |

### Electrical Characteristics $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| $BV_{GDO}$ | Gate-Drain Breakdown Voltage | $I_G$= -100uA | -20 | | | V |
| $V_{GS}$(off) | Gate-Source Cut-off Voltage | $V_{DS}$=5V, $I_D$=1μA | | -0.6 | -1.5 | V |
| $I_{DSS}$ | Drain Current | $V_{DS}$=5V, $V_{GS}$=0 | 100 | | 350 | μA |
| $\|Y_{FS}\|$ | Forward Transfer Admittance | $V_{DS}$=5V, $V_{GS}$=0, f=1MHz | 0.4 | 1.2 | | ms |
| $C_{ISS}$ | Input Capacitance | $V_{DS}$=5V, $V_{GS}$=0, f=1MHz | | 3.5 | | pF |
| $C_{RSS}$ | Output Capacitance | $V_{DS}$=5V, $V_{GS}$=0, f=1MHz | | 0.65 | | pF |

### $I_{DSS}$ Classification

| Classification | A | B | C |
|---|---|---|---|
| $I_{DSS}$(μA) | 100 ~ 170 | 150 ~ 240 | 210 ~ 350 |

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# Typical Characteristics

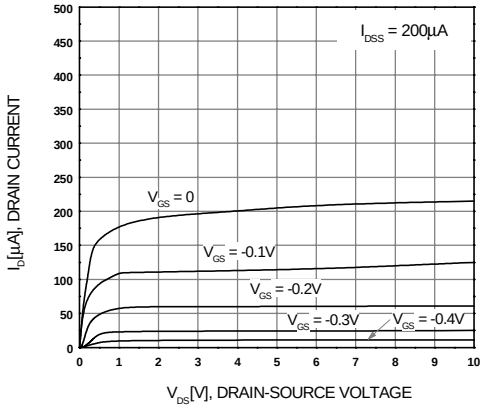



**Figure 1. $I_D$-$V_{DS}$**

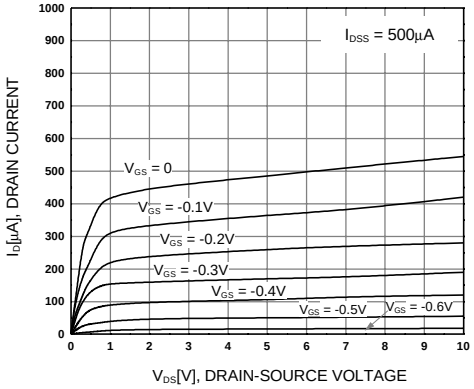



**Figure 2. $I_D$-$V_{DS}$**

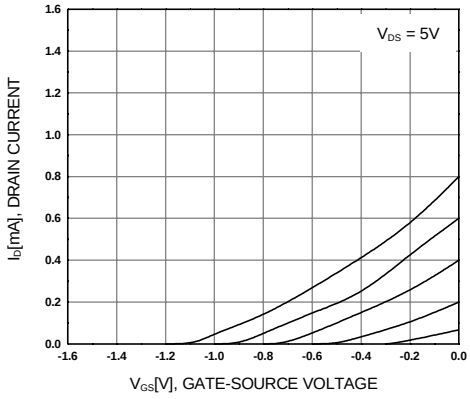



**Figure 3. $I_D$-$V_{GS}$**

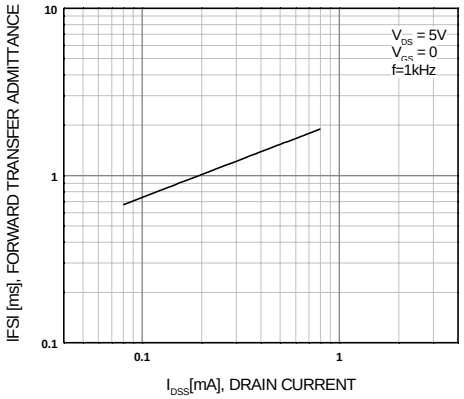



**Figure 4. $|y_{FS}|$-$I_{DSS}$**

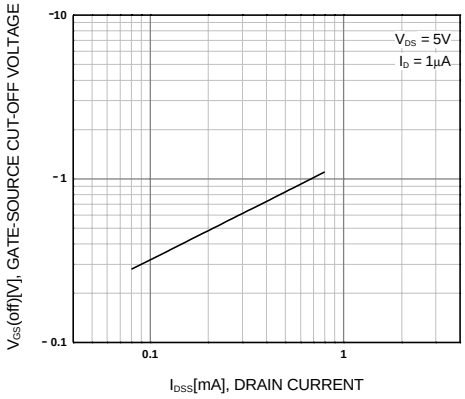



**Figure 5. $V_{GS(off)}$-$I_{DSS}$**

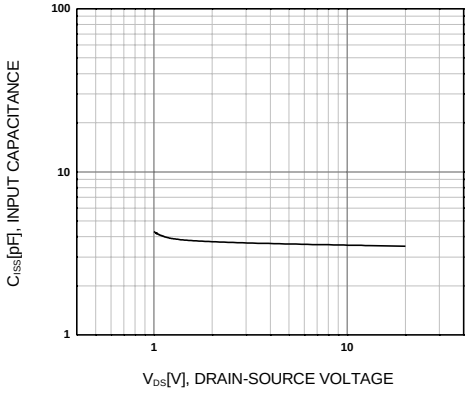



**Figure 6. $C_{ISS}$-$V_{DS}$**

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## Typical Characteristics (Continued)

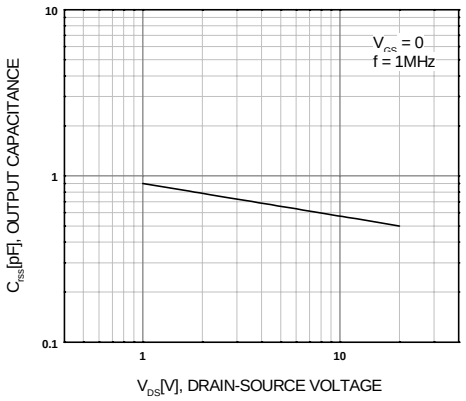



**Figure 7. $C_{RSS}$-$V_{DS}$**

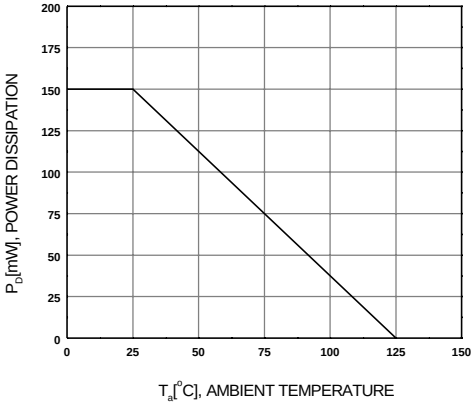



**Figure 8. $P_D$-$T_A$**

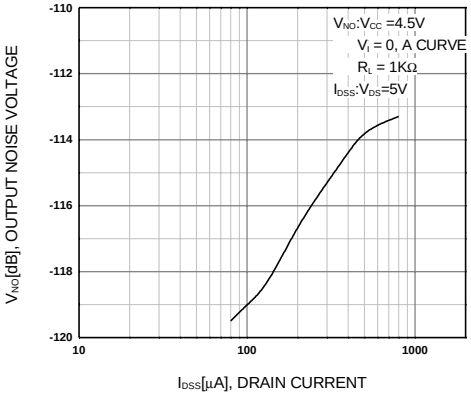



**Figure 9. $V_{NO}$-$I_{DSS}$**

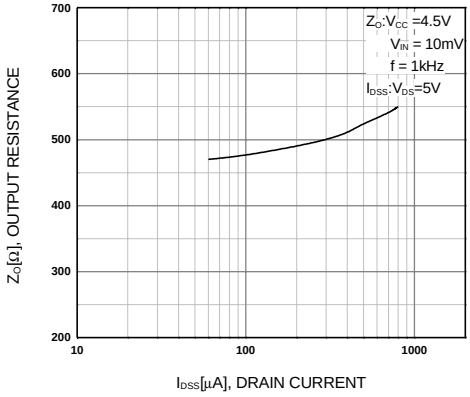
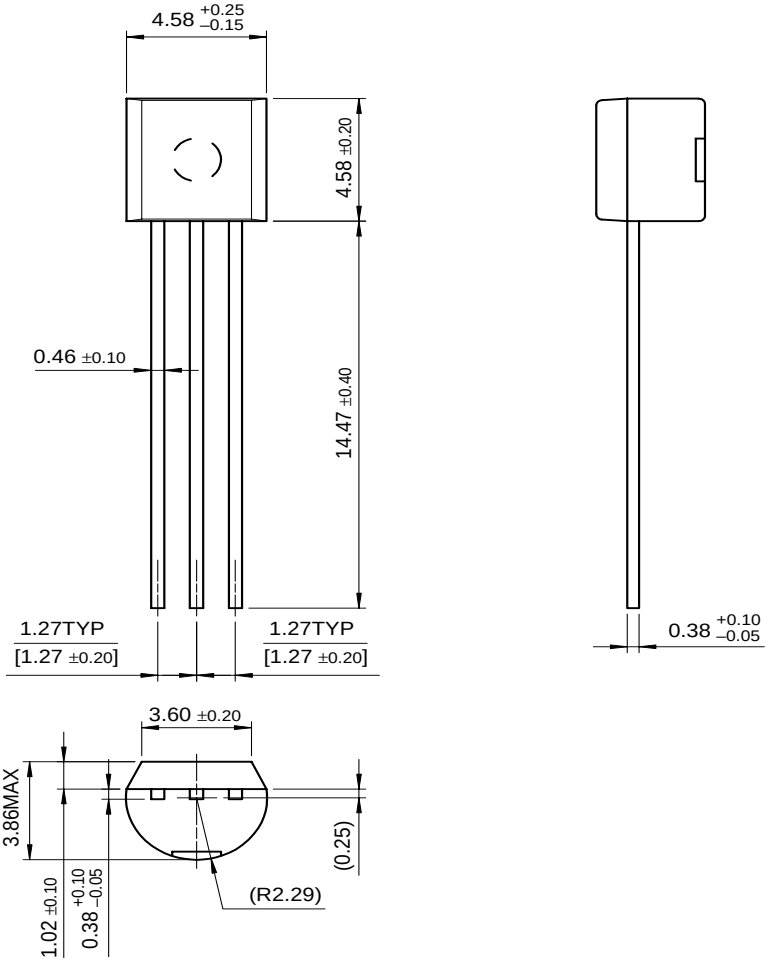



**Figure 10. $Z_O$-$I_{DSS}$**

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## Package Dimensions

TO-92




Dimensions in Millimeters

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| EnSigna™ | $I^2C$™ | OCX™ | RapidConfigure™ | UHC™ |
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