



P-Channel JFETs

2N5460
2N5461
2N5462

SST5460
SST5461
SST5462

| PRODUCT SUMMARY | | | | |
|-----------------|--------------------------|------------------------------|--------------------------|---------------------------|
| Part Number | V _{GS(off)} (V) | V _{(BR)GSS} Min (V) | g _{fs} Min (mS) | I _{DSS} Min (mA) |
| 2N/SST5460 | 0.75 to 6 | 40 | 1 | -1 |
| 2N/SST5461 | 1 to 7.5 | 40 | 1.5 | -2 |
| 2N/SST5462 | 1.8 to 9 | 40 | 2 | -4 |

FEATURES

- High Input Impedance
- Very Low Noise
- High Gain: A_V = 80 @ 20 μA
- Low Capacitance: 1.2 pF Typical

BENEFITS

- Low Signal Loss/System Error
- High System Sensitivity
- High-Quality Low-Level Signal Amplification

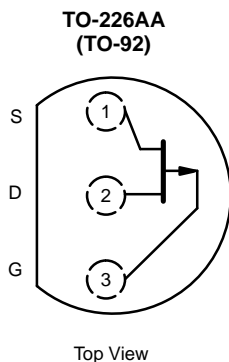
APPLICATIONS

- Low-Current, Low-Voltage Amplifiers
- High-Side Switching
- Ultrahigh Input Impedance Pre-Amplifiers

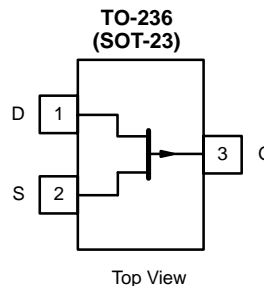
DESCRIPTION

The 2N/SST5460 series are p-channel JFETs designed to provide all-around performance in a wide range of amplifier and analog switch applications.

The 2N series, TO-226AA (TO-92), and SST series, TO-236 (SOT-23), plastic packages provide low cost options, and are available in tape-and-reel for automated assembly, (see Packaging Information).



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SST5460 (B0)*
SST5461 (B1)*
SST5462 (B2)*

*Marking Code for TO-236

ABSOLUTE MAXIMUM RATINGS

Gate-Drain Voltage 40 V
 Gate-Source Voltage 40 V
 Gate Current -10 mA
 Storage Temperature -65 to 150°C
 Operating Junction Temperature -55 to 150°C

Lead Temperature (1/16" from case for 10 sec.) 300°C
 Power Dissipation^a 350 mW

Notes
 a. Derate 2.8 mW/°C above 25°C



| SPECIFICATIONS (T _A = 25 °C UNLESS OTHERWISE NOTED) | | | | | | | | | | | | |
|--|----------------------|--|--|------------|-----|------------|-----|------------|-----|------|--------|----|
| Parameter | Symbol | Test Conditions | Typ ^a | Limits | | | | | | Unit | | |
| | | | | 2N/SST5460 | | 2N/SST5461 | | 2N/SST5462 | | | | |
| | | | | Min | Max | Min | Max | Min | Max | | | |
| Static | | | | | | | | | | | | |
| Gate-Source Breakdown Voltage | V _{(BR)GSS} | I _G = 10 μA, V _{DS} = 0 V | 55 | 40 | | 40 | | 40 | | V | | |
| Gate-Source Cutoff Voltage | V _{GS(off)} | V _{DS} = -15 V, I _D = -1 μA | | 0.75 | 6 | 1 | 7.5 | 1.8 | 9 | | | |
| Saturation Drain Current ^b | I _{DSS} | V _{DS} = -15 V, V _{GS} = 0 V | | -1 | -5 | -2 | -9 | -4 | -16 | mA | | |
| Gate Reverse Current | I _{GSS} | V _{GS} = 20 V, V _{DS} = 0 V | 0.003 | | 5 | | 5 | | 5 | nA | | |
| | | | T _A = 100 °C | 0.0003 | | 1 | | 1 | | 1 | μA | |
| Gate Operating Current | I _G | V _{DG} = -20 V, I _D = -0.1 mA | 3 | | | | | | | pA | | |
| Drain Cutoff Current | I _{D(off)} | V _{DS} = -15 V, V _{GS} = 10 V | -5 | | | | | | | | | |
| Gate-Source Voltage | V _{GS} | V _{DS} = -15 V | I _D = -0.1 mA | 1.3 | 0.5 | 4 | | | | | V | |
| | | | I _D = -0.2 mA | 2.3 | | | 0.8 | 4.5 | | | | |
| | | | I _D = -0.4 mA | 3.8 | | | | | 1.5 | 6 | | |
| Gate-Source Forward Voltage | V _{GS(F)} | I _G = -1 mA, V _{DS} = 0 V | -0.7 | | | | | | | | | |
| Dynamic | | | | | | | | | | | | |
| Common-Source Forward Transconductance | g _{fs} | V _{DS} = -15 V, V _{GS} = 0 V f = 1 kHz | | 1 | 4 | 1.5 | 5 | 2 | 6 | mS | | |
| Common-Source Output Conductance | g _{os} | | | | 75 | | 75 | | 75 | μS | | |
| Common-Source Reverse Transfer Capacitance | C _{iss} | V _{DS} = -15 V, V _{GS} = 0 V f = 1 MHz | 2N | 4.5 | | 7 | | 7 | | 7 | pF | |
| | | | SST | 4.5 | | | | | | | | |
| Common-Source Reverse Transfer Capacitance | C _{rss} | | | 1.2 | | | | | | | | |
| | | | 2N | 1.5 | | 2 | | 2 | | 2 | | |
| Common-Source Output Capacitance | C _{oss} | | | 1.5 | | | | | | | | |
| | | | SST | 1.5 | | | | | | | | |
| Equivalent Input Noise Voltage | ē _n | V _{DS} = -15 V, V _{GS} = 0 V f = 100 Hz | 2N | 15 | | 115 | | 115 | | 115 | nV/√Hz | |
| | | | SST | 15 | | | | | | | | |
| Noise Figure | NF | | V _{DS} = -15 V, V _{GS} = 0 V f = 100 Hz, R _G = 1 MΩ BW = 1 Hz | 2N | 0.2 | | 2.5 | | 2.5 | | 2.5 | dB |
| | | | | SST | 0.2 | | | | | | | |

Notes

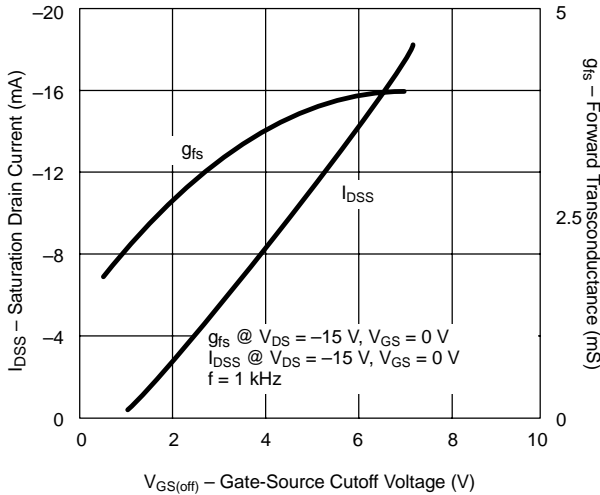
- a. Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.
- b. Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.

PSCIB

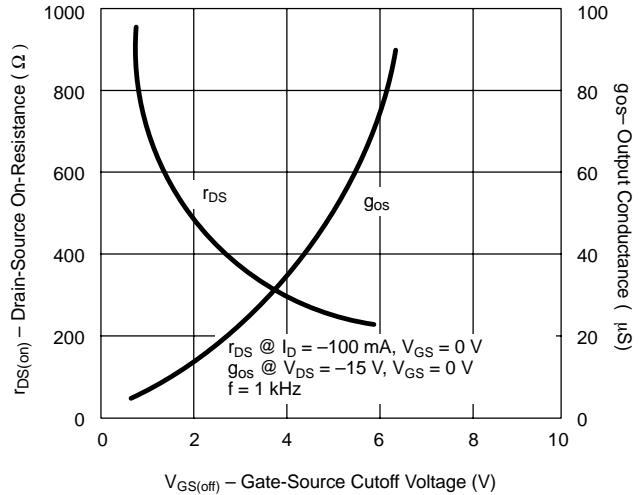


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

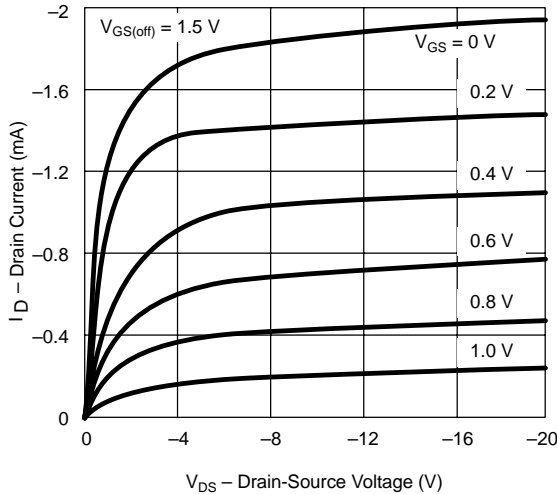
Drain Current and Transconductance vs. Gate-Source Cutoff Voltage



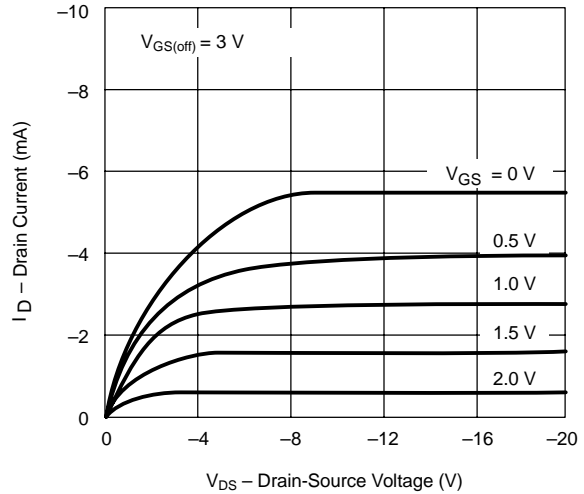
On-Resistance and Output Conductance vs. Gate-Source Cutoff Voltage



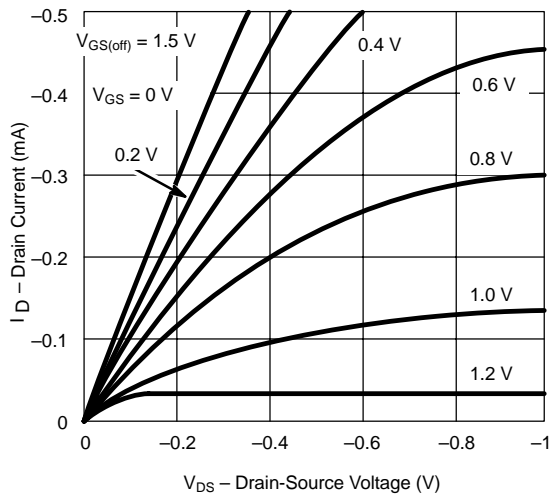
Output Characteristics



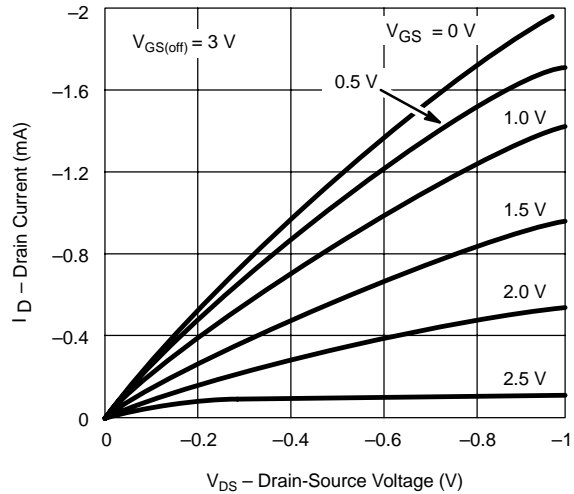
Output Characteristics



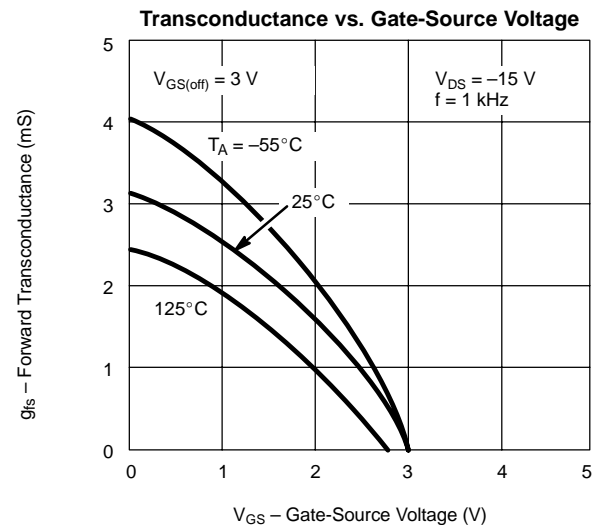
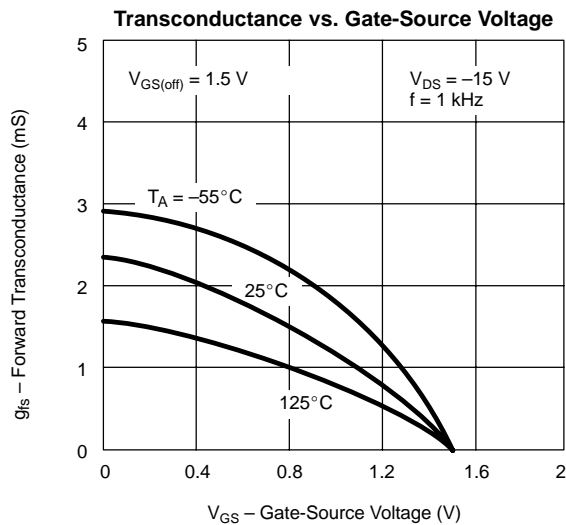
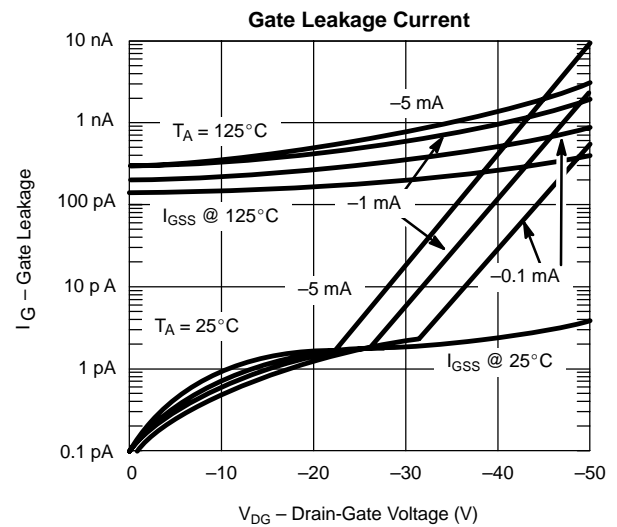
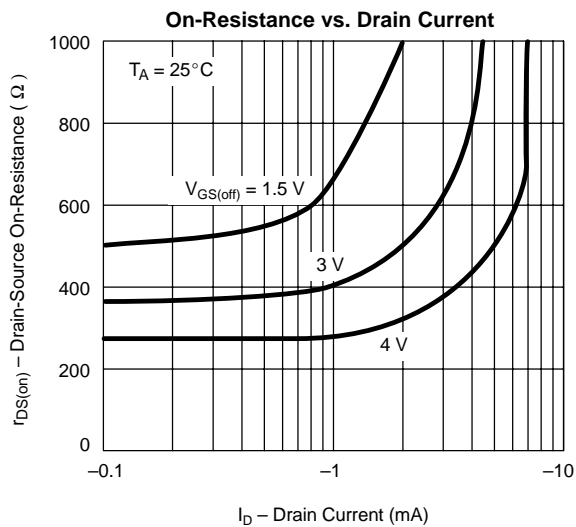
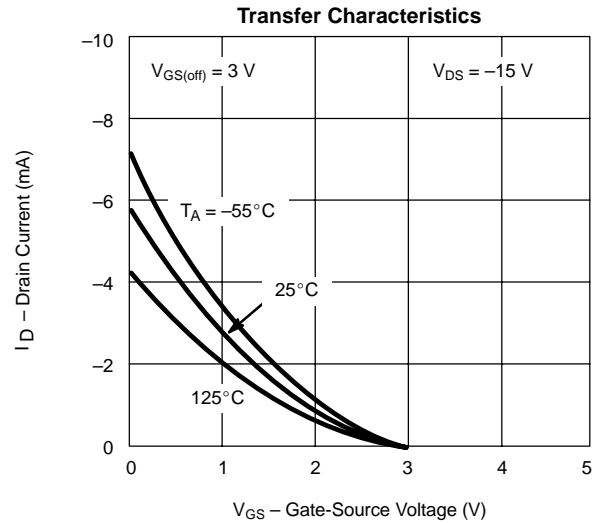
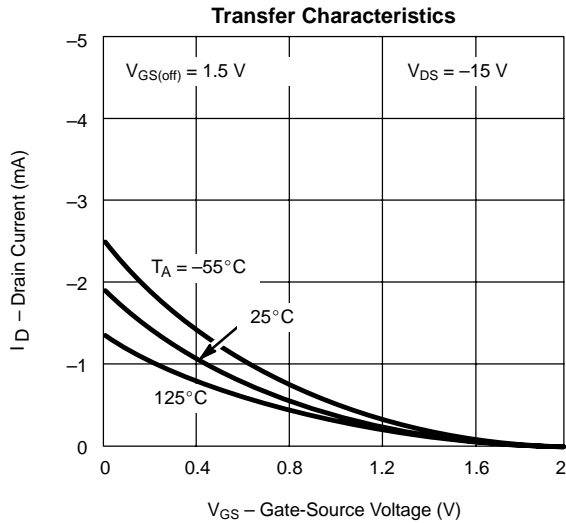
Output Characteristics



Output Characteristics

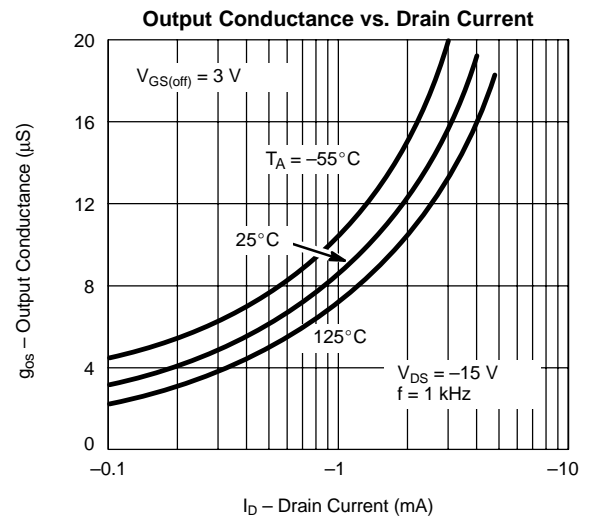
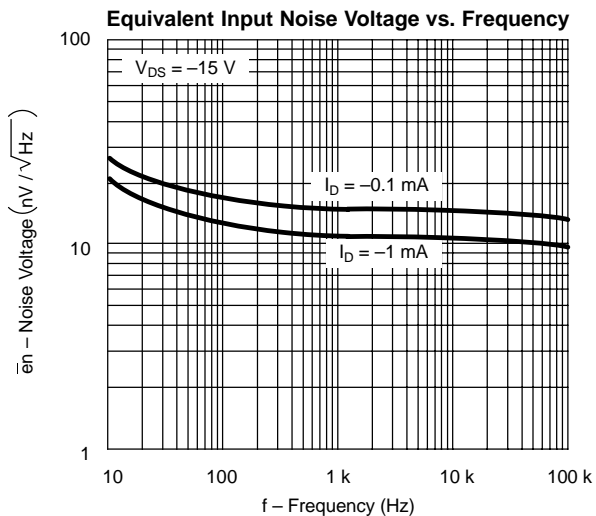
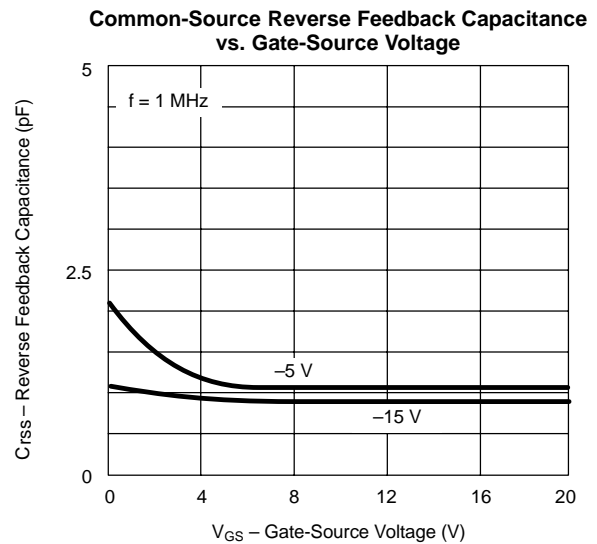
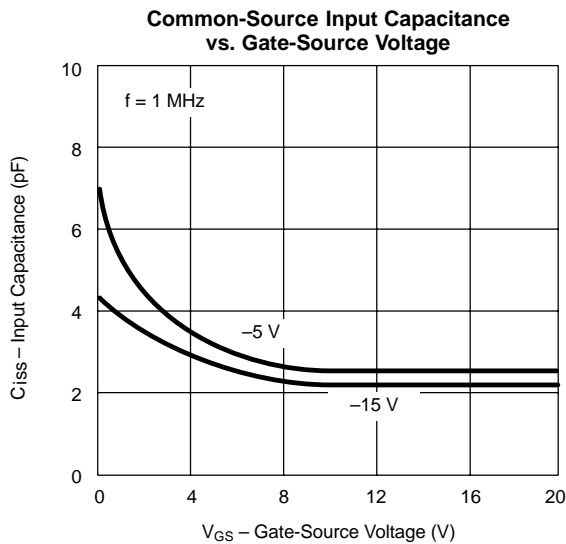
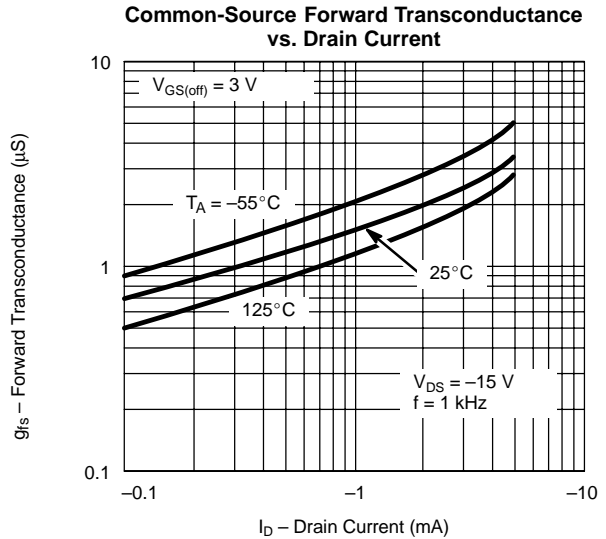
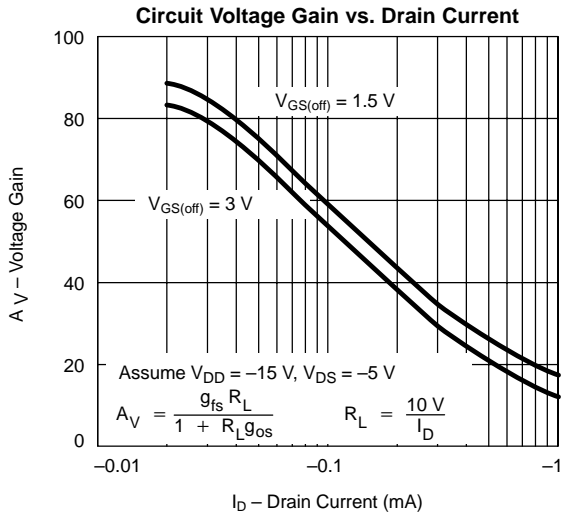


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)





TYPICAL CHARACTERISTICS (T_A = 25°C UNLESS OTHERWISE NOTED)





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