Analog Power 60V N-Ch Depletion Mode MOSFET
Native Conduction Unleashed: Dependable Normally-On 60V Switching in an Industry-Standard SOT-23 Footprint!

San Jose, California, October 31, 2026 – To provide analog and power system designers with specialized switching flexibility, Analog Power today rolled out the promotional release for the BSS159N, an advanced 60V N-channel Depletion Mode MOSFET optimized for zero-bias operation in a compact SOT-23 package. Unlike conventional enhancement-mode transistors, the BSS159N features normally-on behavior, conducting seamlessly with a typical $R_{DS(on)}$ of 8Ω at $V_{GS} = 0$V (and dropping to 3.5 Ω under forward gate bias). This inherent characteristic makes it the ideal semiconductor choice for constant-current sources, start-up bias networks, and fail-safe disconnect paths, eliminating redundant external biasing circuitry and simplifying compact high-voltage board layouts.

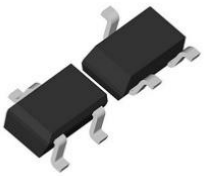
With its low threshold cutoff capability, low input capacitance ($C_{iss} = 33$ pF), and solid thermal dissipation, the BSS159N delivers stable current limiting and ultra-fast turn-off response. It redefines efficiency for auxiliary power rails and precision sensing without draining standby energy or consuming valuable board real estate.

Key Features of the Device Include:

- Normally-On Depletion Mode Architecture: Conducts naturally at zero gate bias ($V_{GS} = 0$V), enabling self-starting circuits and fail-safe logic control
- 60V Drain-Source Capability: Delivers reliable voltage blocking margins for industrial sensing and automotive auxiliary lines
- Optimized On-State Conduction: Engineered for 8 Ω ($V_{GS} = 0$V) and down to 3.5 Ω ($V_{GS} = 10$V) to balance linear regulation with low conduction loss
- Ultra-Low Capacitance Profile: Minimal parasitic capacitance ensures high-speed response and eliminates switching drag in dynamic circuits
- Compact Thermal Footprint: Industry-standard SOT-23 surface-mount package engineered with low thermal impedance for cooler continuous operation

Typical Applications**:**

- Off-Line & SMPS Start-Up Circuits requiring zero-gate-voltage current paths
- Precision Constant Current Regulators & Sources for LED string biasing and sensor conditioning
- Automotive Sensing & Protection Modules needing fail-safe disconnect behavior
- Industrial DC/DC Converters & Auxiliary Power Rails requiring compact voltage clamping
- High-Impedance Buffers & Solid-State Relays in test, measurement, and telecom systems



The BSS159N 8Ω 60V N-channel Depletion Mode MOSFET in the SOT-23 package is currently available for sampling and volume production. The preliminary datasheet and technical documentation can be accessed by visiting the Analog Power website:
https://www.analogpowerinc.com/datasheet.php?part=BSS159N
For more information, visit www.analogpowerinc.com.

About Analog Power: Founded in 2002 in San Jose, CA, USA, Analog Power is a leading manufacturer of Power MOSFETs. It produces not only a complete line of N- and P-channel MOSFETs from 12V to 1.5kV, but also application specific MOSFETs that facilitate smaller and higher performance end products. Using tier-1 wafer foundries and assembly and test outsourcing, Analog Power provides the quality and reliability levels of market leaders, yet remains dynamic and customer-driven.

Contact Information

Analog Power Inc
A7 1F No. 58, Zhouzi St.,
Neihu Dist., Taipei City 114064, Taiwan
https://www.analogpowerinc.com/contactus.html