



enhancement-type n-channel MOSFET designed for . . .

- General Purpose Amplifiers
- Analog Switches
- Digital Switching

**Performance Curves
MBN See Section 4**

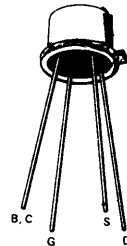
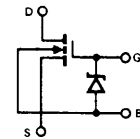
BENEFITS

- Low Insertion Loss
 $R_{DS(on)} = 100 \Omega$ Maximum
- Rugged
Zener Diode Input Protection

ABSOLUTE MAXIMUM RATINGS (25°C)

Drain-to-Source Voltage	30 V
Gate-to-Source Voltage	30 V
Gate-to-Drain Voltage	30 V
Drain Current	50 mA
Gate Zener Current	± 0.1 mA
Storage Temperature	-65 to 150°C
Operating Junction Temperature	-55 to +125°C
Total Device Dissipation (Derate 2.25 mW/°C to 125°C)	225 mW

TO-72
See Section 6



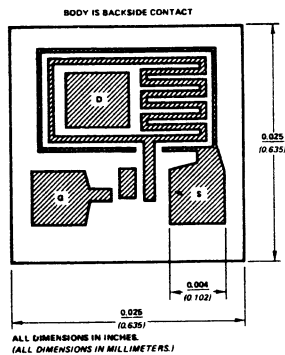
M116

ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

	Characteristic	M116		Unit	Test Condition
		Min	Max		
1	I _{GSS} Gate-Body Leakage		100	pA	V _{GS} = 20 V, V _{DS} = V _{BS} = 0
2	V _{GS(th)} Gate Threshold Voltage	1	5		V _{GS} = V _{DS} , I _D = 10 μ A, V _{BS} = 0
3	BV _{DSS} Drain-Source Breakdown Voltage	30		V	I _D = 1 μ A, V _{GS} = V _{BS} = 0
4	BV _{SDS} Source-Drain Breakdown Voltage	30			I _S = 1 μ A, V _{GD} = V _{BD} = 0
5	BV _{GBS} Gate-Body Breakdown Voltage	30	60		I _G = 10 μ A, V _{SB} = V _{DB} = 0
6	I _{D(off)} Drain Cutoff Current		10	nA	V _{DS} = 20 V, V _{GS} = V _{BS} = 0
7	I _{S(off)} Source Cutoff Current		10		V _{SD} = 20 V, V _{GD} = V _{BD} = 0
8	r _{DS(on)} Drain Source ON Resistance		100	Ω	V _{GS} = 20 V, I _D = 100 μ A, V _{BS} = 0
9			200		V _{GS} = 10 V, I _D = 100 μ A, V _{BS} = 0
10	C _{iss} Input Capacitance		10	pF	V _{GB} = 0, V _{DB} = 10 V, V _{BS} = 0
11	C _{gs} Gate-Source Capacitance		2.5		V _{GB} = V _{DB} = 0
12	C _{gd} Gate-Drain Capacitance		2.5		Body Guarded
13	C _{db} Drain-Body Capacitance		7		V _{GB} = 0, V _{DB} = 10 V

MBN

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enhancement-type n-channel MOSFET designed for . . .

- Audio Amplifiers
- Analog Circuits
- Digital Switching Circuits
- Commutating Circuits

TYPE
Single
Single

PACKAGE
TO-72
Chip



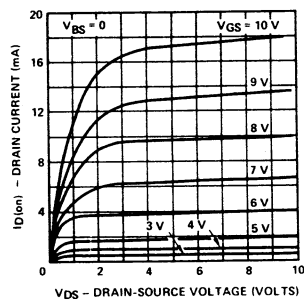
BENEFITS:

- Integrated Zener Clamp Protects the Gate
- Normally OFF

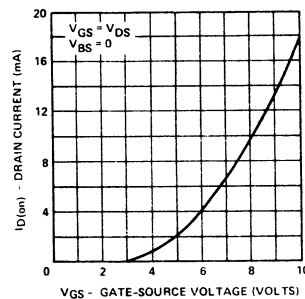
PRINCIPAL DEVICES
M116
M116CHP

PERFORMANCE CURVES (25°C unless otherwise noted)

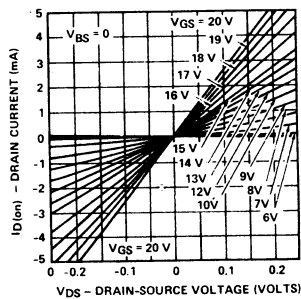
Output Characteristics



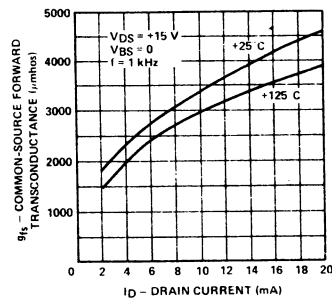
Transfer Characteristic



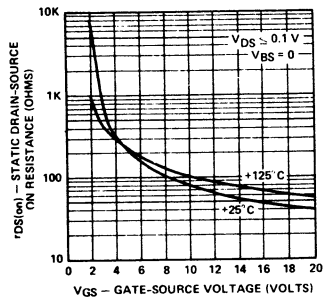
Low Voltage Output Characteristics



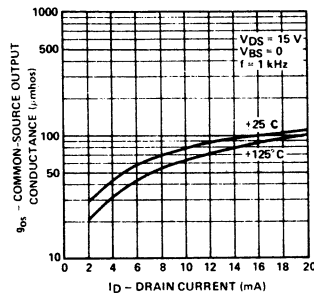
Forward Transconductance vs Drain Current



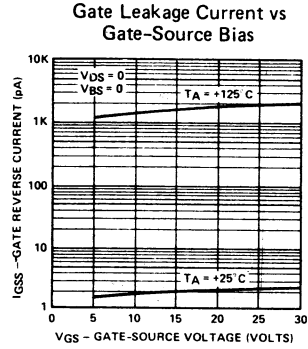
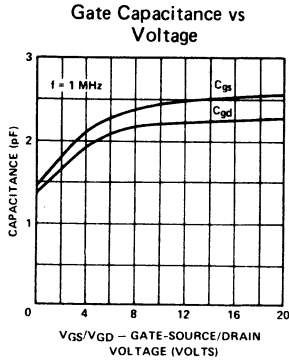
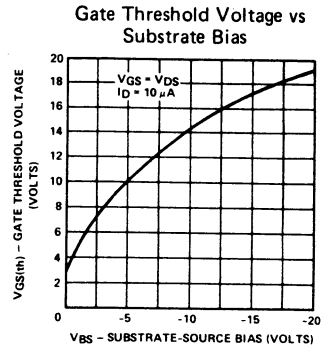
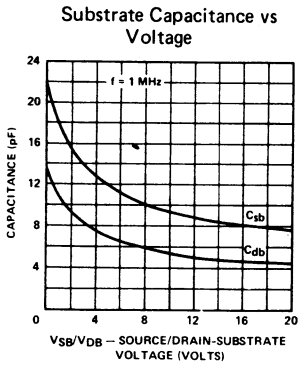
Drain-Source ON State Resistance vs Gate-Source Bias



Output Conductance vs Drain Current



PERFORMANCE CURVES (Cont'd) (25°C unless otherwise noted)



Source-Drain Leakage Currents vs Voltage

