calogic
LLC

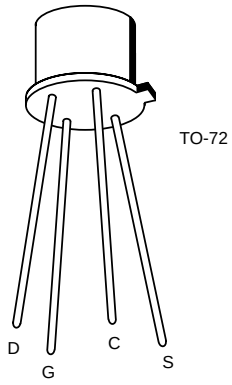
N-Channel Enhancement Mode MOSFET General Purpose Amplifier/Switch

2N4351

FEATURES

- **Low ON Resistance**
- **Low Capacitance**
- **High Gain**
- **High Gate Breakdown Voltage**
- **Low Threshold Voltage**

PIN CONFIGURATION



1003

ABSOLUTE MAXIMUM RATINGS

(T_A = 25°C unless otherwise noted)

Drain-Source Voltage or Drain-Body Voltage 25V
Peak Gate-Source Voltage (Note 1) . . . . . ±125V
Drain Current 100mA
Storage Temperature Range . . . . . -65°C to +200°C
Operating Temperature Range . . . . . -55°C to +150°C
Lead Temperature (Soldering, 10sec) . . . . . +300°C
Power Dissipation 375mW
Derate above 25°C . . . . . 3mW/°C

NOTE: Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ORDERING INFORMATION

Part	Package	Temperature Range
2N4351	Hermetic TO-72	-55°C to +150°C
X2N4351	Sorted Chips in Carriers	-55°C to +150°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
BV_{DSS}	Drain-Source Breakdown Voltage	25		V	I_D = 10μA, V_{GS} = 0
I_{GSS}	Gate Leakage Current		10	pA	V_{GS} = ±30V, V_{DS} = 0
I_{DSS}	Zero-Gate-Voltage Drain Current		10	nA	V_{DS} = 10V, V_{GS} = 0
$V_{GS(th)}$	Gate-Source Threshold Voltage	1	5	V	V_{DS} = 10V, I_D = 10μA
$I_{D(on)}$	"ON" Drain Current	3		mA	V_{GS} = 10V, V_{DS} = 10V
$V_{DS(on)}$	Drain-Source "ON" Voltage		1	V	I_D = 2mA, V_{GS} = 10V
$r_{DS(on)}$	Drain-Source Resistance		300	ohms	V_{GS} = 10V, I_D = 0, f = 1kHz
$\lvert y_{fs} \rvert$	Forward Transfer Admittance	1000		μS	V_{DS} = 10V, I_D = 2mA, f = 1kHz
C_{rss}	Reverse Transfer Capacitance (Note 2)		1.3	pF	V_{DS} = 0, V_{GS} = 0, f = 1MHz
C_{iss}	Input Capacitance (Note 2)		5.0		V_{DS} = 10V, V_{GS} = 0, f = 1MHz
$C_{d(sub)}$	Drain-Substrate Capacitance (Note 2)		5.0		$V_{D(SUB)}$ = 10V, f = 1MHz
$t_{d(on)}$	Turn-On Delay (Note 2)		45	ns	
t_r	Rise Time (Note 2)		65		
$t_{d(off)}$	Turn-Off Delay (Note 2)		60		
t_f	Fall Time (Note 2)		100		

NOTES: **1.** Device must not be tested at ±125V more than once or longer than 300ms.
2. For design reference only, not 100% tested.