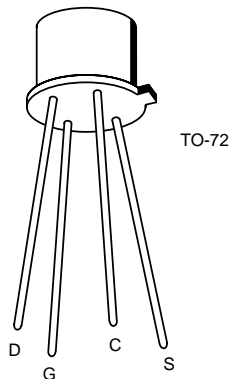


### FEATURES

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

### PIN CONFIGURATION



1003

### ABSOLUTE MAXIMUM RATINGS

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

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

**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	$-55^\circ\text{C}$ to $+150^\circ\text{C}$
X2N4351	Sorted Chips in Carriers	$-55^\circ\text{C}$ to $+150^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

SYMBOL	PARAMETER	MIN	MAX	UNITS	TEST CONDITIONS
$BV_{DSS}$	Drain-Source Breakdown Voltage	25		V	$I_D = 10\mu\text{A}$ , $V_{GS} = 0$
$I_{GSS}$	Gate Leakage Current		10	pA	$V_{GS} = \pm 30\text{V}$ , $V_{DS} = 0$
$I_{DSS}$	Zero-Gate-Voltage Drain Current		10	nA	$V_{DS} = 10\text{V}$ , $V_{GS} = 0$
$V_{GS(th)}$	Gate-Source Threshold Voltage	1	5	V	$V_{DS} = 10\text{V}$ , $I_D = 10\mu\text{A}$
$I_{D(on)}$	"ON" Drain Current	3		mA	$V_{GS} = 10\text{V}$ , $V_{DS} = 10\text{V}$
$V_{DS(on)}$	Drain-Source "ON" Voltage		1	V	$I_D = 2\text{mA}$ , $V_{GS} = 10\text{V}$
$r_{DS(on)}$	Drain-Source Resistance		300	ohms	$V_{GS} = 10\text{V}$ , $I_D = 0$ , $f = 1\text{kHz}$
$ y_{fs} $	Forward Transfer Admittance	1000		$\mu\text{S}$	$V_{DS} = 10\text{V}$ , $I_D = 2\text{mA}$ , $f = 1\text{kHz}$
$C_{rss}$	Reverse Transfer Capacitance (Note 2)		1.3	pF	$V_{DS} = 0$ , $V_{GS} = 0$ , $f = 1\text{MHz}$
$C_{iss}$	Input Capacitance (Note 2)		5.0		$V_{DS} = 10\text{V}$ , $V_{GS} = 0$ , $f = 1\text{MHz}$
$C_{d(sub)}$	Drain-Substrate Capacitance (Note 2)		5.0		$V_{D(SUB)} = 10\text{V}$ , $f = 1\text{MHz}$
$t_{d(on)}$	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  $\pm 125\text{V}$  more than once or longer than 300ms.  
2. For design reference only, not 100% tested.