

**MAXIMUM RATINGS**

Rating	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DS</sub>	25	Vdc
Drain-Gate Voltage	V <sub>DG</sub>	30	Vdc
Gate-Source Voltage*	V <sub>GS</sub>	30	Vdc
Drain Current	I <sub>D</sub>	30	mAdc
Total Device Dissipation (α T <sub>A</sub> = 25°C Derate above 25°C)	P <sub>D</sub>	300 1.7	mW mW/°C
Total Device Dissipation (α T <sub>C</sub> = 25°C Derate above 25°C)	P <sub>D</sub>	800 4.56	mW mW/°C
Junction Temperature Range	T <sub>J</sub>	175	°C
Storage Temperature Range	T <sub>stg</sub>	-65 to +175	°C

\*Transient potentials of ±75 Volt will not cause gate-oxide failure.

**2N4351**

**MOS FET  
SWITCHING**

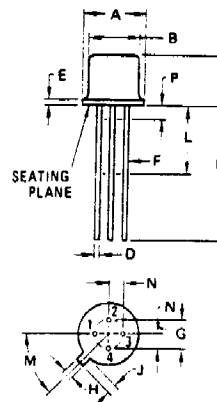
**N-CHANNEL — ENHANCEMENT**

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted.)**

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Drain-Source Breakdown Voltage (I <sub>D</sub> = 10 μA, V <sub>GS</sub> = 0)	V <sub>(BR)DSX</sub>	25	—	Vdc
Zero-Gate-Voltage Drain Current (V <sub>DS</sub> = 10 V, V <sub>GS</sub> = 0) T <sub>A</sub> = 25°C T <sub>A</sub> = 150°C	I <sub>DSS</sub>	—	10	nAdc μAdc
Gate Reverse Current (V <sub>GS</sub> = ±15 Vdc, V <sub>DS</sub> = 0)	I <sub>GSS</sub>	—	±10	pAdc
<b>ON CHARACTERISTICS</b>				
Gate Threshold Voltage (V <sub>DS</sub> = 10 V, I <sub>D</sub> = 10 μA)	V <sub>GS(Th)</sub>	1.0	5	Vdc
Drain-Source On-Voltage (I <sub>D</sub> = 2.0 mA, V <sub>GS</sub> = 10 V)	V <sub>DS(on)</sub>	—	1.0	V
On-State Drain Current (V <sub>GS</sub> = 10 V, V <sub>DS</sub> = 10 V)	I <sub>D(on)</sub>	3.0	—	mAdc
<b>SMALL-SIGNAL CHARACTERISTICS</b>				
Forward Transfer Admittance (V <sub>DS</sub> = 10 V, I <sub>D</sub> = 2.0 mA, f = 1.0 kHz)	Y <sub>fs1</sub>	1000	—	μmho
Input Capacitance (V <sub>DS</sub> = 10 V, V <sub>GS</sub> = 0, f = 140 kHz)	C <sub>iss</sub>	—	5.0	pF
Reverse Transfer Capacitance (V <sub>DS</sub> = 0, V <sub>GS</sub> = 0, f = 140 kHz)	C <sub>rss</sub>	—	1.3	pF
Drain-Substrate Capacitance (V <sub>D(SUB)</sub> = 10 V, f = 140 kHz)	C <sub>d(sub)</sub>	—	5.0	pF
Drain-Source Resistance (V <sub>GS</sub> = 10 V, I <sub>D</sub> = 0, f = 1.0 kHz)	r <sub>ds(on)</sub>	—	300	ohms
<b>SWITCHING CHARACTERISTICS</b>				
Turn-On Delay (Fig. 5)	t <sub>d1</sub>	—	45	ns
Rise Time (Fig. 6)	t <sub>r</sub>	—	65	ns
Turn-Off Delay (Fig. 7)	t <sub>d2</sub>	—	60	ns
Fall Time (Fig. 8)	t <sub>f</sub>	—	100	ns

I<sub>D</sub> = 2.0 mAdc, V<sub>DS</sub> = 10 Vdc,  
V<sub>GS</sub> = 10 Vdc  
(See Figure 9; Times Circuit Determined)

TO-72



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.31	5.84	0.209	0.230
B	4.52	4.95	0.178	0.195
C	4.32	5.33	0.170	0.210
D	0.41	0.53	0.016	0.021
E	—	0.76	—	0.030
F	0.41	0.48	0.016	0.019
G	2.54 BSC		0.100 BSC	
H	0.91	1.17	0.036	0.046
J	0.71	1.22	0.028	0.048
K	12.70	—	0.500	—
L	6.35	—	0.250	—
M	45° BSC		150° BSC	
N	1.27 BSC		0.050 BSC	
P	—	1.27	—	0.050

ALL JEDEC dimensions and notes apply



**Quality Semi-Conductors**