

New Jersey Semi-Conductor Products, Inc.

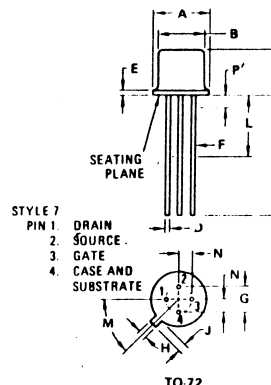
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3N140 (SILICON)

N-CHANNEL

DUAL-GATE
MOS FIELD-EFFECT
TRANSISTOR



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	—	45° BSC	—
N	1.27 BSC	—	0.050 BSC	—
P	—	1.27	—	0.050

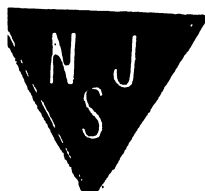
ALL JEDEC dimensions and notes apply

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	25	Vdc
Drain-Gate Voltage	V_{DG}	30	Vdc
Drain Current	I_D	50	mA
Reverse Gate Current	I_G	-10	mA
Forward Gate Current	I_{GF}	10	mA
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	360 2.4	mW mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	1.2 0.8	mW mW/°C
Lead Temperature	T_L	300	°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65°C to +175°C	°C

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Drain-Source Breakdown Voltage ($I_D = 10 \mu\text{A}, V_{G1} = V_{G2} = -5.0 \text{ V}$)	$V_{(BR)DSX}$	25	—	Vdc
* Gate 1-Source Breakdown Voltage ($I_{G1} = \pm 10 \text{ mA}$) Note 1	$V_{(BR)G1SO}$	± 6	± 30	Vdc
Gate 2-Source Breakdown Voltage ($I_{G2} = \pm 10 \text{ mA}$) Note 1	$V_{(BR)G2SO}$	± 6	± 30	Vdc
Gate 1 Leakage Current ($V_{G1S} = \pm 5.0 \text{ V}, V_{G2S} = V_{DS} = 0$)	I_{G1SS}	—	± 10	nA
Gate 2 Leakage Current ($V_{G2S} = \pm 5.0 \text{ V}, V_{G1S} = V_{DS} = 0$)	I_{G2SS}	—	± 10	nA
Gate 1 to Source Cutoff Voltage ($V_{DS} = 15 \text{ V}, V_{G2S} = 4.0 \text{ V}, I_D = 20 \mu\text{A}$)	$V_{G1S(off)}$	-0.5	-4.0	Vdc
Gate 2 to Source Cutoff Voltage ($V_{DS} = 15 \text{ V}, V_{G1S} = 0 \text{ V}, I_D = 20 \mu\text{A}$)	$V_{G2S(off)}$	-0.2	-4.0	Vdc



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