

# New Jersey Semi-Conductor Products, Inc.

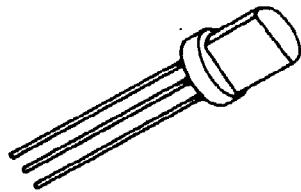
20 STERN AVE.  
SPRINGFIELD, NEW JERSEY 07081  
U.S.A.

TELEPHONE: (973) 376-2922  
(212) 227-8005  
FAX: (973) 376-8900



## Silicon Transistor

2N3721 is a NPN silicon transistor intended for general purpose applications. The planar passivated construction assures excellent device stability and life. This high performance, high value device is made possible by utilizing advanced manufacturing techniques and epoxy encapsulation.



### absolute maximum ratings: (25°C) (unless otherwise specified)

#### Voltages

Collector to emitter	$V_{CEO}$	18	V
Emitter to base	$V_{EBO}$	5	V
Collector to base	$V_{CBO}$	18	V

#### Current

Collector (steady state)	$I_C$	100	mA
--------------------------	-------	-----	----

#### Dissipation

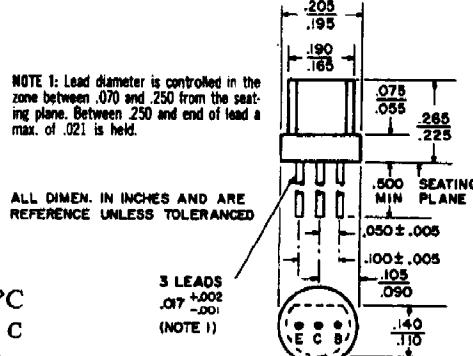
Total Power (Free air @ 25°C)	$P_{T..}$	360	mW
Total Power (Free air @ 55°C)	$P_{T..}$	260	mW

#### Temperature

Storage	$T_{STG}$	-55 to	+125°C
Operating	$T_J$		+125°C

\* Determined from power limitations due to saturation voltage at this current.

\*\* Derate 2.67 mW/°C increase in ambient temperature above 25°C.



### electrical characteristics: (25°C) (unless otherwise specified)

#### DC Characteristics

		Min.	Typ.	Max.	Units
Collector cutoff current: ( $VCB = 18V$ ) ( $VCB = 18V$ , $TA=100^\circ C$ )	$I_{CBO}$			0.5	$\mu A$
Emitter cutoff current: ( $VEB=5V$ )	$I_{EBO}$			15	$\mu A$
				0.5	$\mu A$

#### Small Signal Characteristics

Forward current transfer ratio: ( $VCE=10V$ , $IC = 2\text{ mA}$ , $f = 1\text{ kHz}^\dagger$ )	$h_{FE}$	60	660	
--	----------	----	-----	--

#### Input impedance:

( $VCE=10V$ , $IC=2\text{mA}$ , $f=1\text{ Hz}$ )	$h_{IB}$	15		ohms
---	----------	----	--	------

#### High Frequency Characteristics

Collector capacitance: ( $VCB=10V$ , $IE=0$ , $f=1\text{ MHz}$ )	$C_{cb}$	4.5	7	10	pF
Gain bandwidth product: ( $IC=4\text{mA}$ , $VCB=5V$ )	$f_t$		120		MHz

† Hz=Hertz, equivalent to cycles per second.