New Jersey Semi-Conductor Products, Inc.

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

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

2N404

GERMANIUM TRANSISTOR

JEDEC TO-5 CASE

MAXIMUM RATINGS (T_A=25°C)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	25	V
Collector-Emitter Voltage (Punch-through)	V_{pt}	24	V
Emitter-Base Voltage	V_{EBO}	12	V
Collector Current	I_C	100	mA
Emitter Current	I_E	100	mA
Power Dissipation	P_D	150	mW
Operating Junction Temperature	T_j	-65 TO +85	°C
Storage Temperature	T_{stg}	-65 TO +100	°C

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	V_{CB}=12V		5.0	µA
I_{CBO}	V_{CB}=12V, T_A=80°C		90	µA
I_{EBO}	V_{EB}=2.5V		2.5	µA
BV_{CBO}	I_C=20µA	25		V
BV_{EBO}	I_E=20µA	12		V
V_{CE} (SAT)	I_C=12mA, I_B=0.4mA		0.15	V
V_{CE} (SAT)	I_C=24mA, I_B=1.0mA		0.20	V
V_{BE} (SAT)	I_C=12mA, I_B=0.4mA		0.35	V
V_{BE} (SAT)	I_C=24mA, I_B=1.0mA		0.40	V
h_{FE}	V_{CE}=0.15V, I_C=12mA	30		-
h_{FE}	V_{CE}=0.20V, I_C=24mA	24		-
h_{fe}	V_{CE}=6V, I_C=1mA, f=1.0kHz	135 typ		-
h_{ie}	V_{CE}=6V, I_C=1mA, f=1.0kHz	4.0 typ		kΩ
h_{oe}	V_{CE}=6V, I_C=1mA, f=1.0kHz	50 typ		umho
h_{re}	V_{CE}=6V, I_C=1mA, f=1.0kHz	$7X10^{-4}$ typ		-
c_{ob}	V_{CB}=6V, I_E=0, f=1MHz		20	pF
f_{hfb}	V_{CB}=6V, I_E=1mA	4.0		MHz