New Jersey Semi-Conductor Products, Inc.

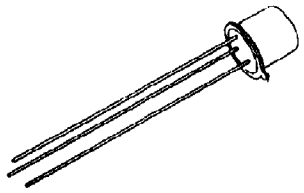
20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

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

2N2840

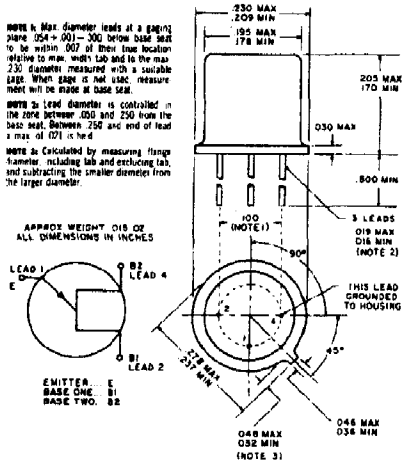
Silicon Unijunction Transistor

NPN



absolute maximum ratings: (25°C)

Power Dissipation*	300	mw
RMS Emitter Current	50	ma
Peak Emitter Current**	2	amps
Emitter Reverse Voltage	30	volts
Interbase Voltage	35	volts
Operating Temperature Range	−65 to +150	°C
Storage Temperature Range	−65 to +175	°C



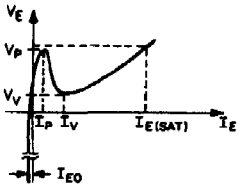
*Derate 2.4 mw/°C increase in ambient temperature. Maximum power available to the transistor must be limited by external circuitry to be within this rating.

**Capacitor Discharge—10 μfd or less, 30 volts or less.

electrical characteristics: (25°C)

PARAMETER		Min.	Typ.	Max.	
Emitter Peak Point Voltage ($V_{BB} = 1.50V$)	V_P	1.30	1.4	1.50	volts
Emitter Peak Point Current ($V_{BB} = 1.50V$)	I_P		7.5	10	μa
Intrinsic Standoff Ratio ($V_{BB} = 10V$)***	η		.62		
Emitter Valley Point Voltage ($V_{BB} = 1.50V$)	V_V		.95	1.10	volts
Emitter Valley Point Current ($V_{BB} = 1.50V$)	I_V	.20	.40	.70	ma
Emitter Base Saturation Current ($V_{BB} = 1.50V$; $V_{EB1} = 1.50V$)	$I_{E(SAT)}$	20	40		ma
Emitter Reverse Current ($V_{B2B} = 30V$; $I_{B1} = 0$)	I_{EO}		.05	1	μa
Interbase Resistance ($V_{BB} = 1.50V$; $I_E = 0$)	R_{BB}	4.7	7	9.1	KΩ

***η is defined by the equation $V_P = \eta V_{BB} + V_D$ where $V_D \sim .5V$.



	TEMPERATURE COEFFICIENT, MV/°C		
	10%	MED	90%
V_P	−2.8	−3.4	−4.0
V_B	−1.7	−2.0	−2.4