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

JEDEC TYPE NO. 2N2015

I. General Description

This device is an NPN silicon triode power transistor designed primarily for untuned amplifier applications.

II. Mechanical Data

A. Outline

TO-36

B. Terminal designations

Terminal	Element
1	Base
2	Emitter
Case	Collector

III. Maximum Ratings

A. Temperature

1. Storage temperature range, T_{stg} . . . . . −65°C to +200°C
2. Operating case temperature range, T_C . . . . . −65°C to +200°C

B. Voltage, at Case Temperature, T_C, of 25°C

1. Collector-base voltage, V_{CBO} . . . . . 100 v
2. Emitter-base voltage, V_{EBO} . . . . . 10 v
3. Collector-emitter voltage, V_{CEO} . . . . . 50 v

C. Current

1. Continuous operating collector current . . . . . 10 a
2. Continuous base current . . . . . 6 a
3. Continuous emitter current . . . . . −13 a

D. Power

1. Continuous power dissipation at or below 25°C case temperature (temperature measured at intersection of seating surface with mounting stud) . . . . . 150 w

   Linear derating factor . . . . . 0.855 w/°C

IV. Electrical Characteristics, 25°C Case Temperature, unless otherwise specified

		Min.	Max.	
A. Static				
1.	Collector cutoff current, I_{CEX} . . . . . V_{CE} = 30 v, V_{BE} = -1.5 v, T_C = 150°C	-	2	ma
2.	Collector cutoff current, I_{CEX} . . . . . V_{CE} = 130 v, V_{BE} = -1.5 v	-	2	ma
3.	Emitter cutoff current, I_{EBO} . . . . . V_{EB} = 10 v, T_C = 25°C	-	0.05	ma
4.	Collector-emitter open base sustain voltage, $V_{CEO(sus)}$ . . . . . I_B = 0, I_C = 200 ma	50	-	v
5.	Collector cutoff current, base open, I_{CEO} I_B = 0, V_{CE} = 40 v	-	0.2	ma
6.	DC forward current transfer ratio, h_{FE} . . . . I_C = 9 a, V_{CE} = 4 v	8	-	
7.	DC forward current transfer ratio, h_{FE} . . . . I_C = 5 a, V_{CE} = 4 v	15	50	
8.	Collector-emitter saturation voltage, $V_{CE(sat)}$ I_C = 5 a, I_B = 0.5 a	-	1.25	v
9.	Base-emitter voltage, V_{BE} . . . . . I_C = 5 a, V_{CE} = 4 v	-	2.2	v
B. Dynamic				
1.	Common emitter small-signal short-circuit forward current transfer ratio cutoff frequency, f_{hfe} . . . . . V_{CE} = 4 v, I_C = 5 a	12	-	kc
2.	Common base output capacitance, C_{ob} . . . . . V_{CB} = 40 v, I_C = 50 μa, f = 1 Mc	-	400	pf
3.	Common emitter small-signal short-circuit . . . forward current transfer ratio, h_{fe} V_{CE} = 4 v, I_C = 1 a, f = 1 kc	12	60	