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

2N4934
2N4935
2N4936

SILICON N-P-N TRANSISTOR

Maximum Ratings, *Absolute-Maximum Values:*

	2N4934	2N4935	2N4936	
COLLECTOR-TO-BASE VOLTAGE, V_{CBO}	40	50	50	max. V
COLLECTOR-TO-EMITTER VOLTAGE, V_{CEO}	30	40	40	max. V
EMITTER-TO-BASE VOLTAGE, V_{EBO}	3	3	3	max. V
COLLECTOR CURRENT, I_C	Limited by dissipation			
TRANSISTOR DISSIPATION, P_T:				
At ambient temperatures: Up to 25°C.	200 max.			mW
Above 25°C.	derate at 1.14 mW/°C			
TEMPERATURE RANGE:				
Storage and operating (Junction)	-65 to +200			°C
LEAD TEMPERATURE (During Soldering):				
At distances not less than 1/32" from seating surface for 10 seconds max.	265 max.			°C

ELECTRICAL CHARACTERISTICS, *At Ambient Temperature (T_A) of 25°C:*

CHARACTERISTIC	Symbol	TEST CONDITIONS					LIMITS								
		Frequency f	DC Collector-to-Base Voltage V_{CB}	DC Collector-to-Emitter Voltage V_{CE}	DC Emitter Current I_E	DC Collector Current I_C	Type 2N4934			Type 2N4935			Type 2N4936		
		MHz	V	V	mA	mA	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.
Collector-Cutoff Current	I_{CBO}	-	15	-	0	-	-	-	10	-	-	10	-	-	10
Collector-to-Base Breakdown Voltage	BV_{CBO}	-	-	-	0	0.001	40	-	-	50	-	-	50	-	-
Collector-to-Emitter Breakdown Voltage	BV_{CEO}	-	-	-	I_B=0	1	30	-	-	40	-	-	40	-	-
Emitter-to-Base Breakdown Voltage	BV_{EBO}	-	-	-	-0.001	0	3	-	-	3	-	-	3	-	-
DC Forward Current-Transfer Ratio	h_{FE}	-	-	8	-	2	40	-	170	60	-	200	60	-	250
Magnitude of Small-Signal Forward Current-Transfer Ratio	$\|h_{fe}\|$ [a]	1 kHz 100 MHz	- -	8 8	- -	2 2	45 7	- -	195 16	70 7	- -	225 16	70 7	- -	280 16
Collector-to-Base Feedback Capacitance	C_{cb} [b]	0.1 to 1	8	-	0	-	-	0.2	0.25	-	0.2	0.25	-	0.2	0.25
Collector-to-Base Time Constant	$r_b'C_c$ [a]	31.9	8	-	-2	-	1	-	8	1	-	6	1	-	6
Small-Signal, Common-Emitter Power Gain in Unneutralized Amplifier Circuit (See Figs. 1 and 4)	G_{pe} [a]	200 450	-	8	-	2	18 -	-	26 -	21 -	-	28 -	- 13	- -	- 18
Small-Signal, Common-Emitter Power Gain in Neutralized Amplifier Circuit	G_{pe} [a]	450	-	8	-	2	-	-	-	-	-	-	-	20	-
Measured Noise Figure	NF [a]	200 See Figs. 1 and 2	R_S = 200 Ω [c]	8	-	2	-	-	3.5	-	-	3.0	-	-	-
		450 See Figs. 3 and 4	R_S = 100 Ω [c]	8	-	2	-	-	-	-	-	-	-	-	4.5