

NTE340 Silicon NPN Transistor RF Power Output, High Frequency

Features:

- High Transition Frequency
- Output of 0.6W can be obtained in the VHF Band (f = 175MHz).

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector–Base Voltage, V_{CBO}	36V
Collector–Emitter Voltage, V_{CEO}	16V
Emitter–Base Voltage, V_{EBO}	3V
Peak Collector Voltage, I_{CP}	0.5A
Collector Current, I_C	0.3A
Collector Power Dissipation, P_C	1W
Operating Junction Temperature, T_j	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 20V, I_E = 0$	–	–	10	μA
DC Current Gain	h_{FE}	$V_{CE} = 13.5V, I_C = 100\text{mA}$	20	50	–	–
Transition Frequency	f_T	$V_{CB} = 10V, I_E = -100\text{mA}, f = 200\text{MHz}$	1.5	2	–	GHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1\text{MHz}$	–	4	8	pF
High–Frequency Output	P_O	$V_{CC} = 13.5V, P_I = 0.03W, f = 175\text{MHz}$	0.6	0.9	–	W
Overall Efficiency	η	$V_{CC} = 13.5V, P_I = 0.03W, f = 175\text{MHz}$	–	60	–	%

