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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 | – | % |

