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NTE306 Silicon NPN Transistor AM, CB Transmitter Driver

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

Collector–Emitter Voltage, V_{CEO}	50V
Collector–Base Voltage, V_{CB}	100V
Emitter–Base Voltage, V_{EB}	6V
Collector Current, I_{C}	1.5A
Base Current, I_{B}	0.5A
Total Device Dissipation, P_{C}	
$T_a = +25^\circ\text{C}$	950mW
$T_c = +25^\circ\text{C}$	7.9W
Operating Junction Temperature Range, T_{J}	-50° to $+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-50° to $+150^\circ\text{C}$
Thermal Resistance, Junction–to–Case, R_{thJC}	12°C/W

Electrical Characteristics: ($T_{\text{C}} = +75^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Cutoff Current	I_{CBO}	$V_{\text{CB}} = 25\text{V}, I_{\text{E}} = 0$	–	–	0.2	μA
Emitter Cutoff Current	I_{EBO}	$V_{\text{EB}} = 6\text{V}, I_{\text{C}} = 0$	–	–	0.2	μA
Base–Emitter Voltage	V_{BE}	$V_{\text{CE}} = 6\text{V}, I_{\text{C}} = 5\text{mA}$	–	–	0.7	V
Collector–Emitter Sustaining Voltage	$V_{\text{CEO(sus)}}$	$I_{\text{C}} = 2\text{mA}$	50	–	–	V
Collector–Emitter Saturation Voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 1\text{A}, I_{\text{B}} = 50\text{mA}$	–	–	0.3	V
Base–Emitter Saturation Voltage	$V_{\text{BE(sat)}}$		–	–	1.0	V
DC Current Gain	h_{FE}	$V_{\text{CE}} = 2\text{V}, I_{\text{C}} = 100\text{mA}$	98	–	649	
		$V_{\text{CE}} = 1\text{V}, I_{\text{C}} = 1\text{A}$	70	–	–	
Small Signal Current Gain	$ h_{\text{FE}} $	$V_{\text{CB}} = 2\text{V}, I_{\text{E}} = 10\text{mA}, f = 10\text{MHz}$	–	18	–	db
Collector Capacitance	C_{C}	$V_{\text{CB}} = 10\text{V}, I_{\text{E}} = 0, f = 1\text{MHz}$	–	16	40	pF

