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NTE224 Silicon NPN Transistor Final RF Power Output for CB $P_O = 4W, 50MHz$

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

Collector-Base Voltage, V_{CBO}	60V
Collector-Emitter Voltage ($R_{BE} = 10\Omega$), V_{CER}	60V
Emitter-Base Voltage, V_{EBO}	4V
Collector Current, I_C	
Continuous	2A
Peak	4A
Emitter Current, I_E	
Continuous	-2A
Peak	-4A
Collector Power Dissipation ($T_C = +25^\circ C$), P_C	10W
Junction Temperature, T_J	+175°C
Storage Temperature Range, T_{stg}	-65° to +175°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30V, I_E = 0$	–	–	10	μA
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 500mA$	10	30	140	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 100mA$	–	–	1.0	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5V, I_C = 500mA$	–	–	1.2	V
Transition Frequency	f_T	$V_{CE} = 10V, I_E = -200mA$	150	300	–	MHz
Collector Output Capacitance	C_{ob}	$V_{BE} = 10V, I_E = 0, f = 1MHz$	–	25	50	pF
Output Power	P_O	$V_{CC} = 12V, f = 50MHz,$ $P_{in} = 0.4W, \eta = 60\%$	4	5	–	W

