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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	$\mu A$
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

