

NTE2322

Silicon PNP Transistor Quad, General Purpose

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO}	40V
Collector–Base Voltage, V_{CBO}	60V
Emitter–Base Voltage, V_{EBO}	5V
Continuous Collector Current, I_C	600mA
Total Device Dissipation ($T_A = +25^\circ\text{C}$, Each Transistor), P_D	0.65W
Derate Above 25°C	6.5mW/ $^\circ\text{C}$
Total Device Dissipation ($T_A = +25^\circ\text{C}$, Total Device), P_D	1.9W
Derate Above 25°C	19mW/ $^\circ\text{C}$
Operating Junction Temperature Range, T_J	-55° to $+125^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$
Thermal Resistance, Junction–to–Ambient, R_{thJA}	66 $^\circ\text{C}/\text{W}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}$, $I_B = 0$, Note 1	40	–	–	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}$, $I_E = 0$	60	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$, $I_C = 0$	5	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 30\text{V}$, $I_E = 0$	–	–	50	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 3\text{V}$, $I_E = 0$	–	–	50	nA
ON Characteristics (Note 1)						
DC Current Gain	h_{FE}	$V_{CE} = 10\text{V}$, $I_C = 10\text{mA}$	75	–	–	
		$V_{CE} = 10\text{V}$, $I_C = 150\text{mA}$	100	–	–	
		$V_{CE} = 10\text{V}$, $I_C = 300\text{mA}$	30	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 150\text{mA}$, $I_B = 15\text{mA}$	–	–	0.4	V
		$I_C = 300\text{mA}$, $I_B = 30\text{mA}$	–	–	1.6	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 150\text{mA}$, $I_B = 15\text{mA}$	–	–	1.5	V
		$I_C = 300\text{mA}$, $I_B = 30\text{mA}$	–	–	2.6	V

Note 1. Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Small-Signal Characteristics						
Current Gain-Bandwidth Product	f_T	$V_{CE} = 20\text{V}, I_C = 50\text{mA}, f = 100\text{MHz}$	200	–	–	MHz
Output Capacitance	C_{obo}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	–	–	8	pF
Input Capacitance	C_{ibo}	$V_{EB} = 2\text{V}, I_C = 0, f = 1\text{MHz}$	–	–	30	pF

Pin Connection Diagram

