

2SD965

NPN Silicon Epitaxial Planar Transistor

for low-frequency power and stroboscope applications.

The transistor is subdivided into three groups P, Q and R, according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	20	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	5	A
Peak Collector Current	I_{CP}	8	A
Power Dissipation	P_{tot}	750	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$, $I_C = 0.5\text{ A}$ at $V_{CE} = 2\text{ V}$, $I_C = 1\text{ A}$ Current Gain Group	P h_{FE}	120	-	250	-
	Q h_{FE}	230	-	380	-
	R h_{FE}	340	-	600	-
	h_{FE}	150	-	-	-
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	I_{CBO}	-	-	0.1	μA
Collector Emitter Cutoff Current at $V_{CE} = 10\text{ V}$	I_{CEO}	-	-	1.0	μA
Emitter Base Cutoff Current at $V_{EB} = 7\text{ V}$	I_{EBO}	-	-	0.1	μA
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	V_{CEO}	20	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	V_{EBO}	7	-	-	V
Collector Emitter Saturation Voltage at $I_C = 3\text{ A}$, $I_B = 0.1\text{ A}$	$V_{CE(sat)}$	-	-	1	V
Current Gain Bandwidth Product at $V_{CB} = 6\text{ V}$, $I_E = -50\text{ mA}$, $f = 200\text{ MHz}$	f_T	-	150	-	MHz
Collector Output Capacitance at $V_{CB} = 20\text{ V}$, $f = 1\text{ MHz}$ (Common base, input open circuited)	C_{ob}	-	-	50	pF



