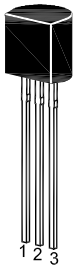
2SD471

NPN Silicon Epitaxial Planar Transistor

Audio Frequency Power amplifier applications.

The transistor is subdivided into three group, O, Y and G 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 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Power Dissipation	P_{tot}	800	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 1 V, I_C = 100 mA	Current Gain Group	O	h_{FE}	70	-	140	-
		Y	h_{FE}	120	-	240	-
		G	h_{FE}	200	-	400	-
Collector Base Cutoff Current at V_{CB} = 30 V			I_{CBO}	-	-	100	nA
Collector Base Breakdown Voltage at I_C = 100 µA			$V_{(BR)CBO}$	40	-	-	V
Collector Emitter Breakdown Voltage at I_C = 10 mA			$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at I_E = 100 µA			$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = 1 A, I_B = 100 mA			$V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage at I_C = 1 A, I_B = 100 mA			$V_{BE(sat)}$	-	-	1.2	V
Transition Frequency at V_{CE} = 6 V, I_C = 10 mA			f_T	-	130	-	MHz
Collector Output Capacitance at V_{CB} = 6 V, f = 1 MHz			C_{ob}	-	18	-	pF

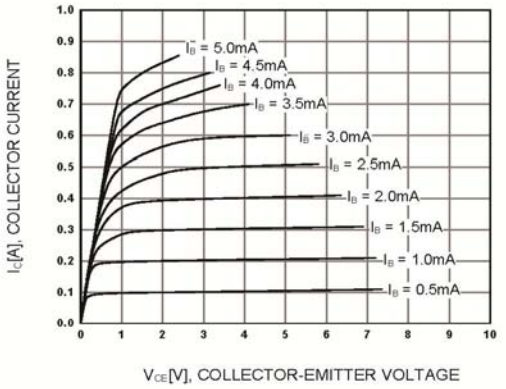


Figure 1. Static Characteristic

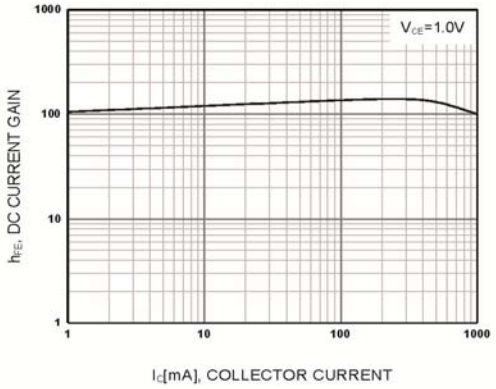


Figure 2. DC current Gain

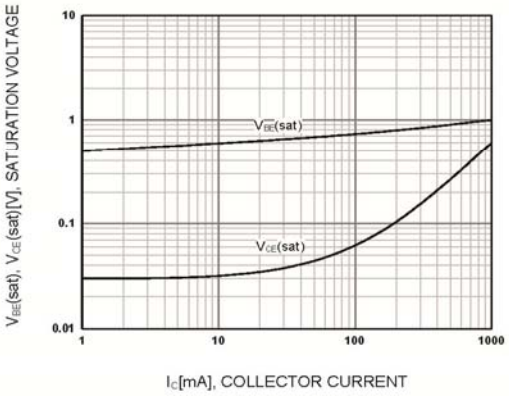


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

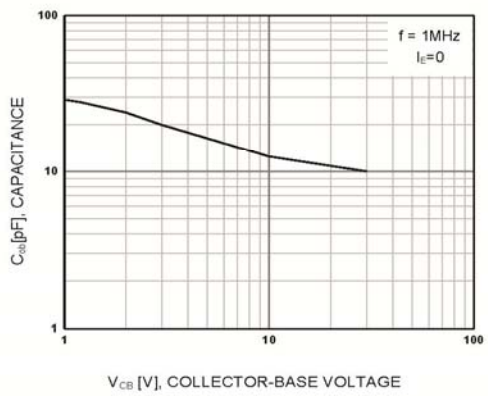


Figure 4. Collector Output Capacitance

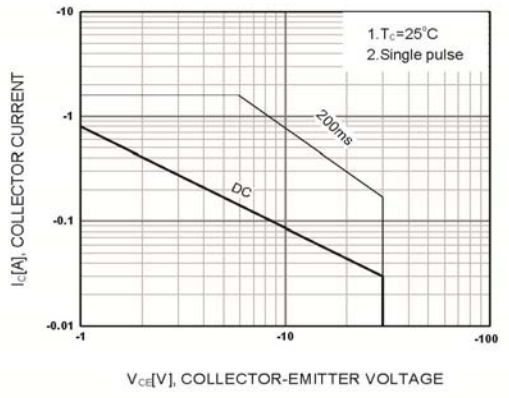


Figure 5. Safe Operating Area