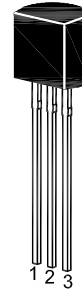


2SA1013

PNP Silicon Epitaxial Planar Transistor

The transistor is subdivided into three groups, R, O and Y, 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	$-V_{CBO}$	160	V
Collector Emitter Voltage	$-V_{CEO}$	160	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	1	A
Base Current	$-I_B$	0.5	A
Power Dissipation	P_{tot}	900	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.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 200\text{ mA}$	h_{FE}	60	120	-
Current Gain Group R O Y	h_{FE}	100	200	-
	h_{FE}	160	320	-
	h_{FE}			
Collector Base Cutoff Current at $-V_{CB} = 150\text{ V}$	$-I_{CBO}$	-	1	μA
Emitter Base Cutoff Current at $-V_{EB} = 6\text{ V}$	$-I_{EBO}$	-	1	μA
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	160	-	V
Collector Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	1.5	V
Base Emitter On Voltage at $-I_C = 5\text{ mA}$, $-V_{CE} = 5\text{ V}$	$-V_{BE(on)}$	0.45	0.75	V
Current Gain Bandwidth Product at $-V_{CE} = 5\text{ V}$, $-I_C = 200\text{ mA}$	f_T	15	-	MHz
Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{OB}	-	35	pF

