

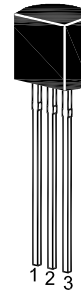
# 2SC1675

## NPN Silicon Epitaxial Planar Transistor

FM/AM RF AMP, MIX, CONV, OSC, IF

The transistor is subdivided into three groups, R, O, Y, according to its DC current gain.

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



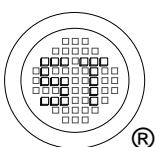
1. Emitter 2. Base 3. Collector  
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	50	mA
Collector Power Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 6\text{ V}$ , $I_C = 1\text{ mA}$	Current Gain Group R	$h_{FE}$	40	-	80	-
	O	$h_{FE}$	70	-	140	-
	Y	$h_{FE}$	120	-	240	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$	
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$	
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	50	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 5\text{ mA}$	$V_{(BR)CEO}$	30	-	-	V	
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 1\text{ mA}$	$V_{CE(sat)}$	-	0.08	0.3	V	
Base Emitter On Voltage at $V_{CE} = 6\text{ V}$ , $I_C = 1\text{ mA}$	$V_{BE(on)}$	-	0.67	0.75	V	
Current Gain Bandwidth Product at $V_{CE} = 6\text{ V}$ , $I_C = 1\text{ mA}$	$f_T$	150	300	-	MHz	
Output Capacitance at $V_{CB} = 6\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	2.0	2.5	pF	



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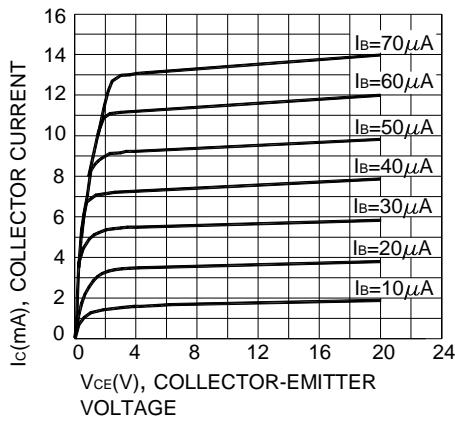


Figure 1. Static Characteristics

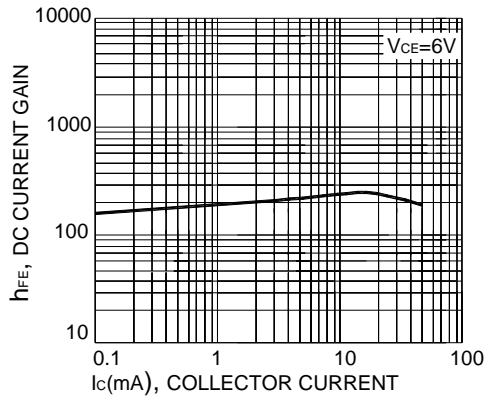


Figure 2. DC Current Gain

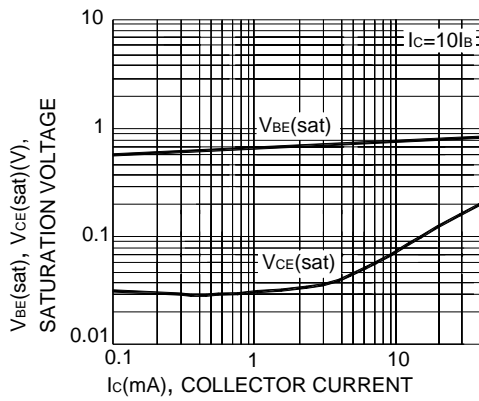


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

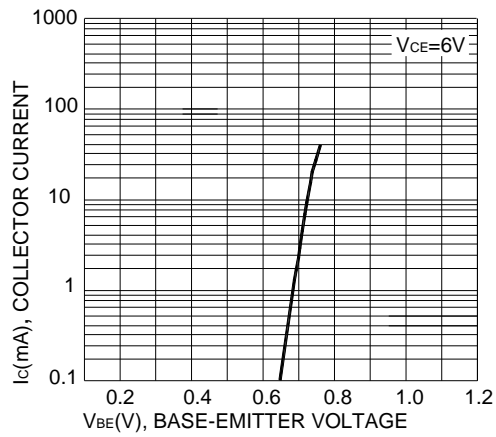


Figure 4. Base-Emitter On Voltage

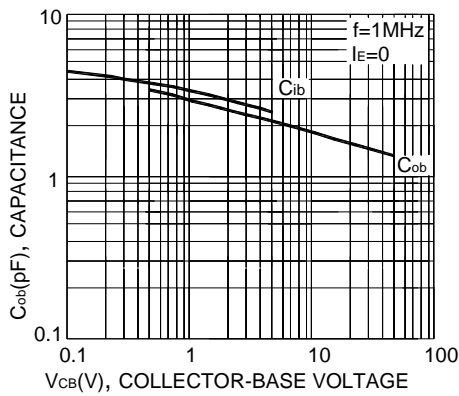


Figure 5. Input Output Capacitance

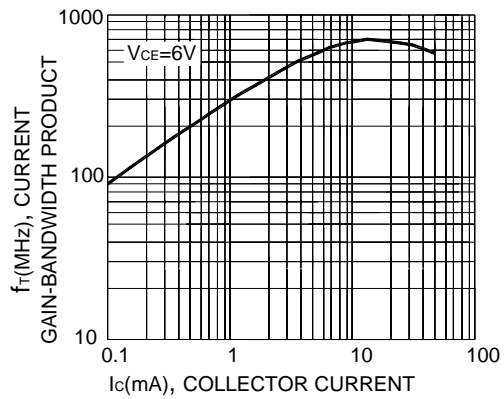
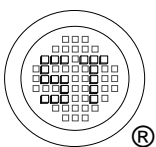


Figure 6. Current Gain Bandwidth Product



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