

# Transistors

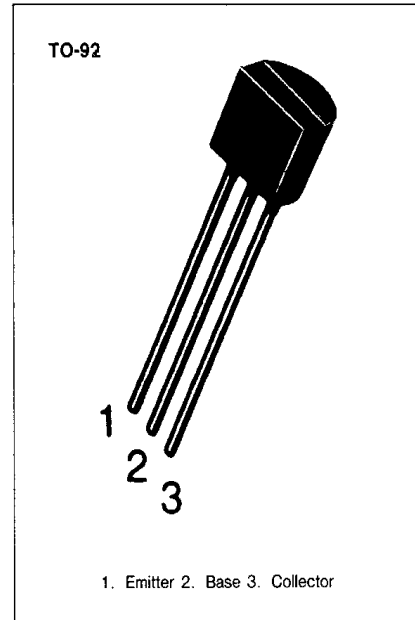
## 2SC1675

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

- Collector-Base Voltage  $V_{CE0} = 30V$
- High Current Gain Bandwidth Product  $f_T = 300MHz$  (Typ)
- Low Collector Capacitance  $C_{ob} = 2.0PF$  (Typ)

### ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

Characteristic	Symbol	Rating	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 Dissipation	$P_C$	250	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ 150	$^\circ C$



### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

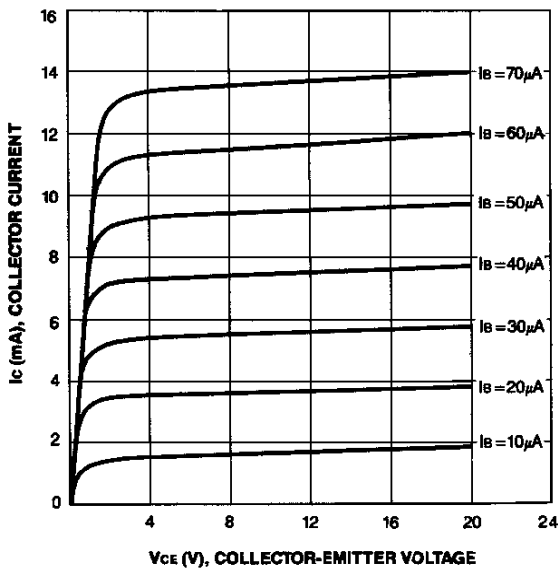
Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 10\mu A, I_E = 0$	50			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 5mA, I_B = 0$	30			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 10\mu A, I_C = 0$	5			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 50V, I_E = 0$			0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			0.1	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 6V, I_C = 1mA$	40		240	
Base-Emitter On Voltage	$V_{BE} (on)$	$V_{CE} = 6V, I_C = 1mA$		0.67	0.75	V
Collector-Emitter Saturation Voltage	$V_{CE} (sat)$	$I_C = 10mA, I_B = 1mA$		0.08	0.3	V
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = 6V, I_C = 1mA$	150	300		MHz
Output Capacitance	$C_{ob}$	$f = 1MHz, V_{CB} = 6V$		2.0	2.5	PF

### $h_{FE}$ CLASSIFICATION

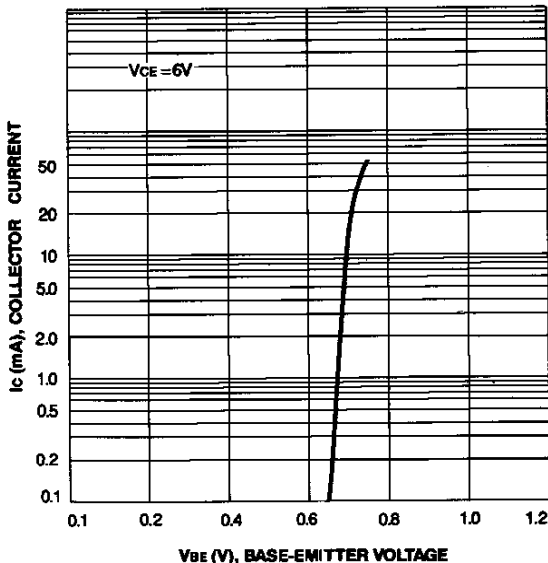
Classification	R	O	Y
$h_{FE}$	40-80	70-140	120-240



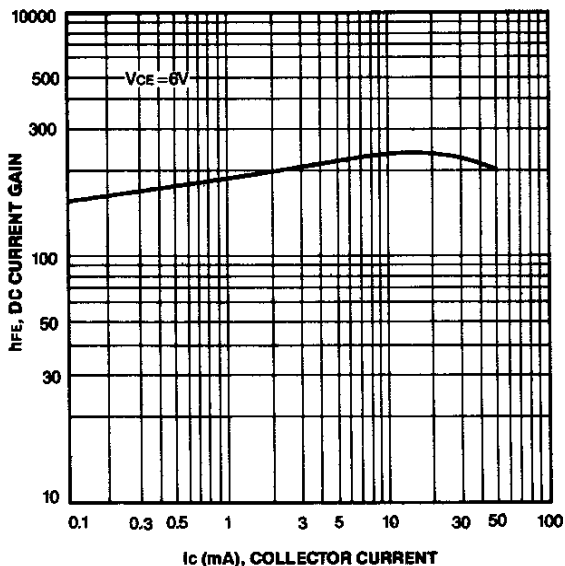
STATIC CHARACTERISTIC



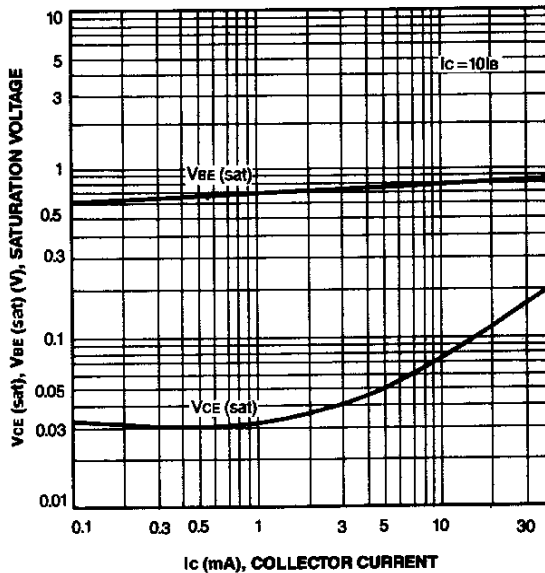
BASE-EMITTER ON VOLTAGE



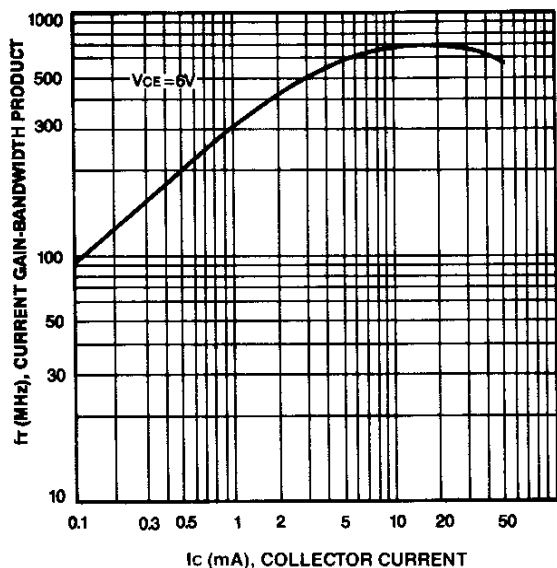
DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR INPUT CAPACITANCE  
COLLECTOR OUTPUT CAPACITANCE

