

NPN SILICON TRANSISTOR

2SC1675

DESCRIPTION

The 2SC1675 is designed for use in AM converter, AM/FM IF amplifier and local oscillator of AM/FM tuner.

FEATURES

- Small output capacitance ($C_{ob} = 1.9$ pF TYP.)
- Low noise figure (NF = 2.0 dB TYP. @1.0 MHz)

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature -55 to +125 °C

Junction Temperature +125 °C Maximum

Maximum Power Dissipation ($T_a = 25$ °C)

Total Power Dissipation 250 mW

Maximum Voltages and Currents ($T_a = 25$ °C)

V_{CBO} Collector to Base Voltage 50 V

V_{CEO} Collector to Emitter Voltage 30 V

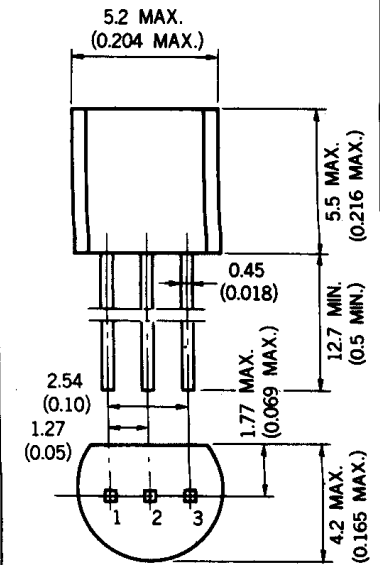
V_{EBO} Emitter to Base Voltage 5.0 V

I_C Collector Current 30 mA

I_B Base Current 30 mA

PACKAGE DIMENSIONS

in millimeters (inches)



1. EMITTER EIAJ : SC-43A
 2. COLLECTOR JEDEC: TO-92
 3. BASE IEC : PA33

ELECTRICAL CHARACTERISTICS ($T_a = 25$ °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE}	DC Current Gain	40	90	180	—	$V_{CE} = 6.0$ V, $I_C = 1.0$ mA
C_{ob}	Output Capacitance		1.9	2.2	pF	$V_{CB} = 6.0$ V, $I_E = 0$, $f = 1.0$ MHz
NF	Noise Figure		2.0	4.0	dB	$V_{CE} = 6.0$ V, $I_E = -1.0$ mA, $R_G = 500$ Ω , $f = 1.0$ MHz
f_T	Gain Bandwidth Product	150	250		MHz	$V_{CE} = 6.0$ V, $I_E = -1.0$ mA
$C_c \tau_{b'b}$	Collector to Base Time Constant		10	15	ps	$V_{CE} = 6.0$ V, $I_E = -10$ mA, $f = 31.9$ MHz
I_{CBO}	Collector Cutoff Current			100	nA	$V_{CB} = 50$ V, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			100	nA	$V_{EB} = 5.0$ V, $I_C = 0$
V_{BE}	Base to Emitter Voltage	0.65	0.70	0.75	V	$V_{CE} = 6.0$ V, $I_C = 1.0$ mA
$V_{CE(sat)}$	Collector Saturation Voltage		0.08	0.30	V	$I_C = 10$ mA, $I_B = 1.0$ mA

Classification of h_{FE}

Rank	M	L	K
Range	40-80	60-120	90-180

h_{FE} Test Conditions : $V_{CE} = 6.0$ V, $I_C = 1.0$ mA