

Silicon PNP Planar RF Transistor

Electrostatic sensitive device.
Observe precautions for handling.

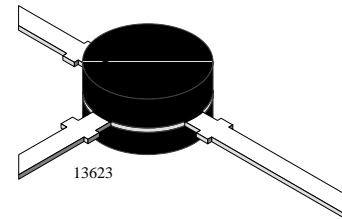
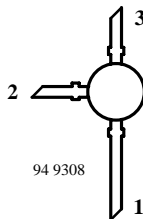


Applications

UHF/VHF uncontrolled prestages with low noise and low modulation.

Features

- High cross modulation performance
- High power gain
- Low noise
- High reverse attenuation



BF979 Marking: BF979
Plastic case (TO 50)
1 = Collector, 2 = Base, 3 = Emitter

Absolute Maximum Ratings

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

Parameter	Test Conditions	Symbol	Value	Unit
Collector-base voltage		$-V_{CBO}$	20	V
Collector-emitter voltage		$-V_{CEO}$	20	V
Emitter-base voltage		$-V_{EBO}$	3	V
Collector current		$-I_C$	50	mA
Total power dissipation	$T_{amb} \leq 60^{\circ}\text{C}$	P_{tot}	300	mW
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-55 to +150	$^{\circ}\text{C}$

Maximum Thermal Resistance

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on glass fibre printed board (40 x 25 x 1.5) mm ³ plated with 35 μm Cu	R_{thJA}	300	K/W

Electrical DC Characteristics

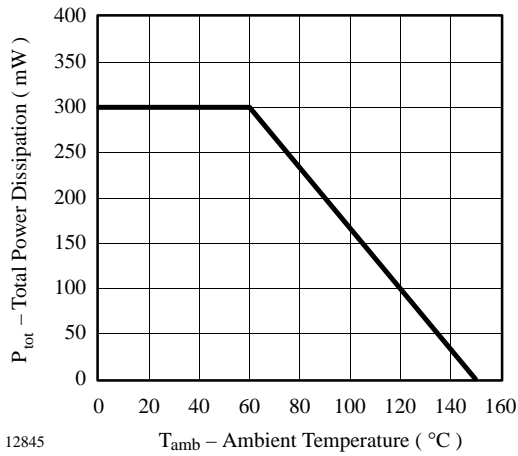
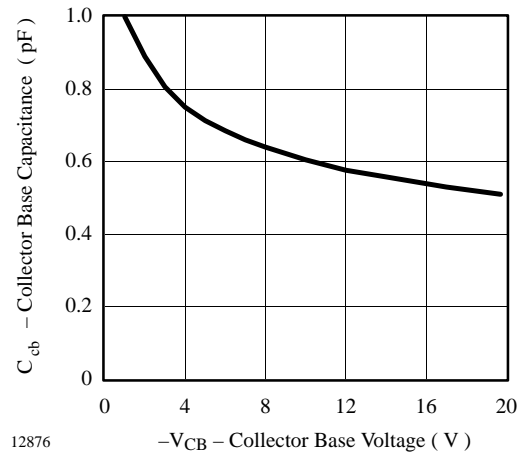
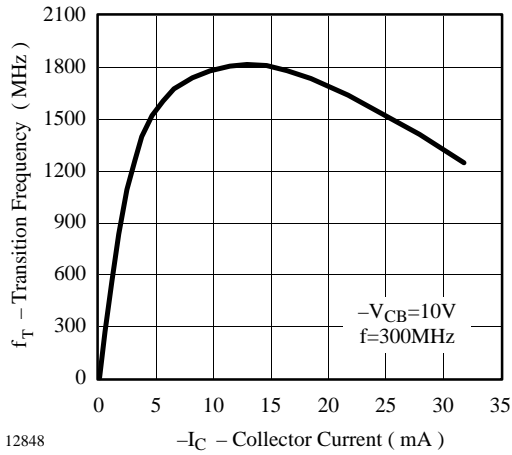
$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Collector cut-off current	$-V_{CE} = 20\text{ V}, V_{BE} = 0$	$-I_{CES}$			100	μA
Collector-base cut-off current	$-V_{CB} = 15\text{ V}, I_E = 0$	$-I_{CBO}$			100	nA
Emitter-base cut-off current	$-V_{EB} = 3\text{ V}, I_C = 0$	$-I_{EBO}$			10	μA
Collector-emitter breakdown voltage	$-I_C = 1\text{ mA}, I_B = 0$	$-V_{(BR)CEO}$	20			V
DC forward current transfer ratio	$-V_{CE} = 10\text{ V}, -I_C = 10\text{ mA}$	h_{FE}	20	50	90	

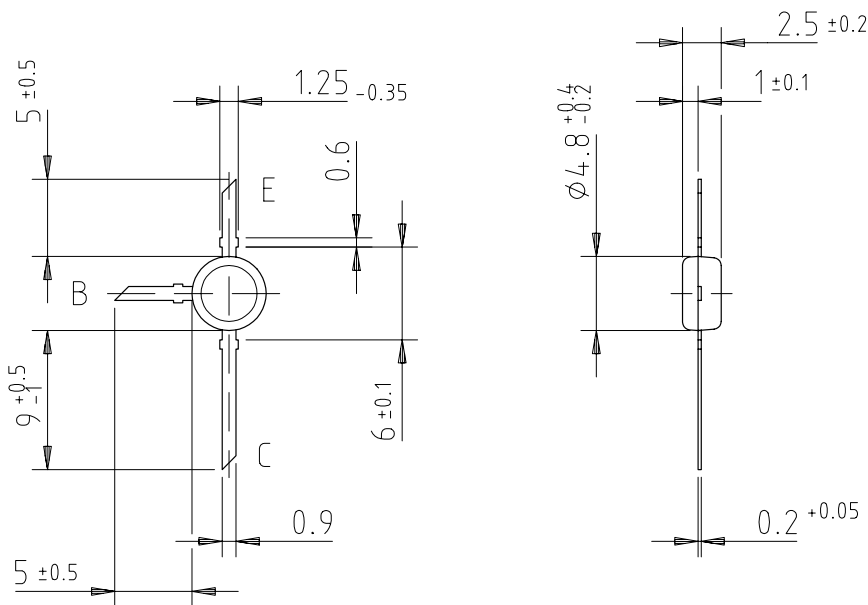
Electrical AC Characteristics

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

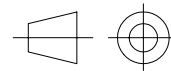
Parameter	Test Conditions	Sym- bol	Min	Typ	Max	Unit
Transition frequency	$-V_{CE} = 10\text{ V}, -I_C = 10\text{ mA}, f = 300\text{ MHz}$	f_T		1750		MHz
Transition frequency	$-V_{CE} = 10\text{ V}, -I_C = 30\text{ mA}, f = 300\text{ MHz}$	f_T		1300		MHz
Collector-base capacitance	$-V_{CB} = 10\text{ V}, f = 1\text{ MHz}$	C_{cb}		0.6		pF
Noise figure	$-V_{CE} = 10\text{ V}, -I_C = 10\text{ mA}, Z_S = 50\ \Omega,$ $f = 800\text{ MHz}$	F		3.4	4.2	dB
Power gain	$-V_{CE} = 10\text{ V}, -I_C = 10\text{ mA}, Z_S = 50\ \Omega, Z_L$ $= 500\ \Omega, f = 800\text{ MHz}$	G_{pb}		16		dB
Collector current for G_{pbmax}	$-V_{CE} = 10\text{ V}, Z_L = 500\ \Omega, f = 800\text{ MHz}$	$-I_C$		10		mA

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Figure 1. Total Power Dissipation vs. Ambient Temperature

Figure 3. Collector Base Capacitance vs. Collector Base Voltage

Figure 2. Transition Frequency vs. Collector Current

Dimensions of BF979 in mm



96 12243



technical drawings
according to DIN
specifications