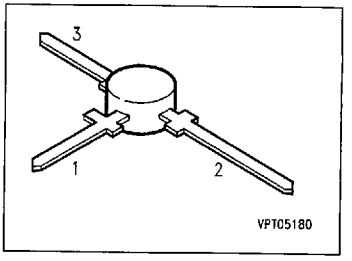
SIEMENS

NPN Silicon RF Transistor

BFT 98T

- For low-distortion broadband amplifier output stages up to 1 GHz at collector currents up to 120 mA and oscillators.



Type	Marking	Ordering Code	Pin Configuration 1	2	3	Package[1]
BFT 98T	BFT 98T	Q62702-F877	E	C	B	T-plast

Maximum Ratings

Parameter	Symbol	Values	Unit
Collector-emitter voltage	V_{CE0}	20	V
Collector-emitter voltage, $V_{BE} = 0$	V_{CES}	30	
Emitter-base voltage	V_{EB0}	3	
Collector current	I_C	150	mA
Peak collector current, $f \geq 1$ MHz	I_{CM}	250	
Base current	I_B	50	
Total power dissipation, $T_A \leq 50$ °C[2]	P_{tot}	800	mW
Junction temperature	T_j	150	°C
Ambient temperature range	T_A	– 65 ... + 150	
Storage temperature range	T_{stg}	– 65 ... + 150	

Thermal Resistance

Junction - ambient[2]	$R_{th\,JA}$	≤ 125	K/W

1) For detailed information see chapter Package Outlines.
2) Package mounted on glass epoxy 35 mm × 35 mm × 1.5 mm.

Electrical Characteristics
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Collector-base cutoff current V_{CB} = 15 V, I_E = 0	I_{CB0}	–	–	100	nA
DC current gain I_C = 80 mA, V_{CE} = 8 V	h_{FE}	25	50	–	–
AC Characteristics					
Transition frequency I_C = 80 mA, V_{CE} = 8 V, f = 200 MHz	f_T	–	3.2	–	GHz
Collector-base capacitance V_{CB} = 15 V, V_{BE} = v_{be} = 0, f = 1 MHz	C_{cb}	–	–	1	pF
Power gain I_C = 80 mA, V_{CE} = 8 V, f = 800 MHz, $Z_S = Z_{Sopt}$, $Z_L = Z_{Lopt}$	G_{pe}	–	12	–	dB
Linear output voltage two-tone intermodulation test I_C = 80 mA, V_{CE} = 8 V, d_{IM} = 60 dB f_1 = 806 MHz, f_2 = 810 MHz, $Z_S = Z_L$ = 50 Ω	$V_{o1} = V_{o2}$	–	420	–	mV
Third order intercept point I_C = 80 mA, V_{CE} = 8 V, f = 800 MHz	IP_3	–	35.5	–	dBm

Total power dissipation $P_{tot} = f(T_A)$
Package mounted on glass epoxy