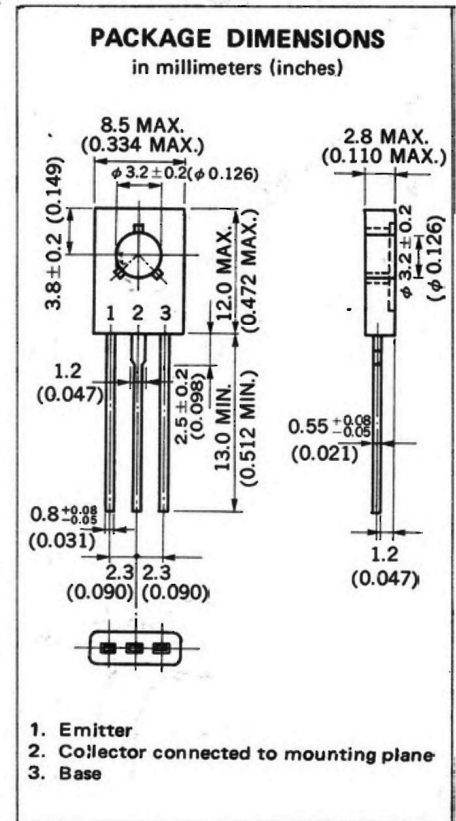


DESCRIPTION The 2SC1957 is designed for use in large signal output amplifier stages. This device is intended for use in Citizen Band and Ham Band communications equipment operating to 50 MHz. High breakdown voltage allows to withstand an open and short circuit load in AM operation.

- FEATURES**
- Specified 12 V, 27 MHz characteristics.
Output Power 1.8 W TYP.
Power Gain 17 dB TYP.
Efficiency 65 % TYP.
 - High breakdown voltage 75 V MIN.



ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Junction Temperature	150 °C Maximum
Maximum Power Dissipations	
Total Power Dissipation (T _a = 25 °C)	0.75 W
Total Power Dissipation (T _c = 25 °C)	5.0 W
Maximum Voltages and Current (T _a = 25 °C)	
V _{CB0} Collector to Base Voltage	75 V
V _{CEO} Collector to Emitter Voltage	40 V
V _{EBO} Emitter to Base Voltage	4.0 V
I _C Collector Current	1.0 A

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

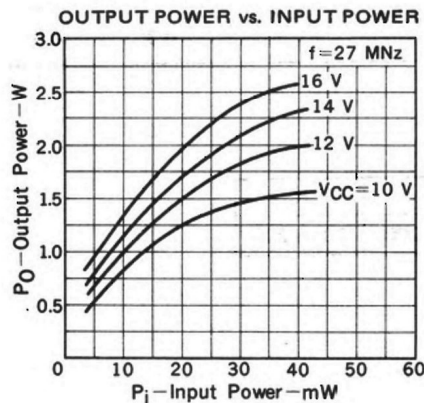
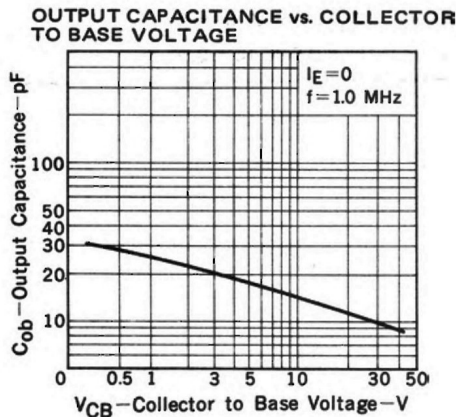
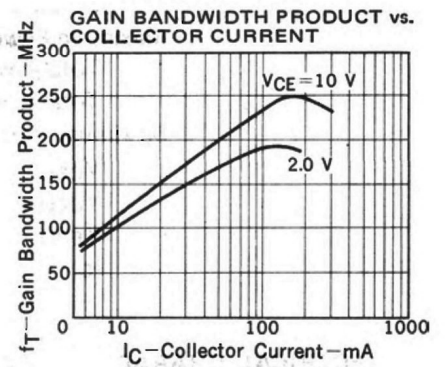
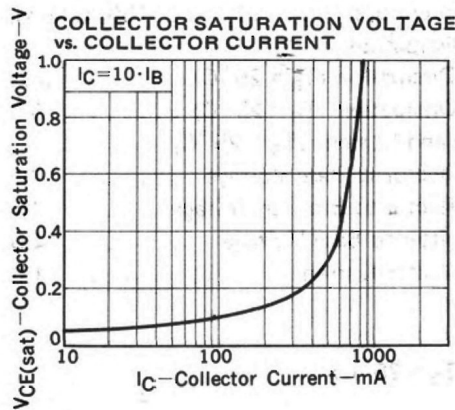
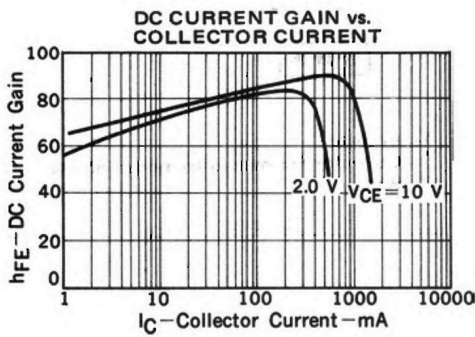
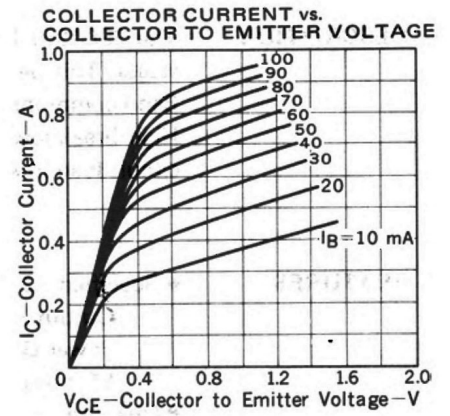
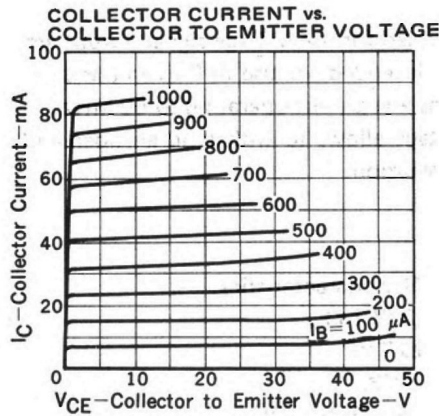
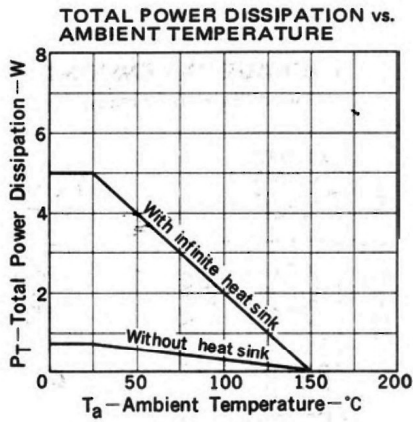
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h _{FE}	DC Current Gain	20	90	200	—	V _{CE} = 10 V, I _C = 0.5 A
f _T	Gain Bandwidth Product	150	250		MHz	V _{CE} = 10 V, I _C = 150 mA
C _{ob}	Output Capacitance		14	20	pF	V _{CB} = 10 V, I _E = 0, f = 1.0 MHz
P _O	Output Power	1.0	1.8		W	V _{CC} = 12 V, f = 27 MHz
η _c	Collector Efficiency	60			%	P _i = 35 mW See Test Circuit.
I _{CB0}	Collector Cutoff Current			1.0	μA	V _{CB} = 40 V, I _E = 0
V _{CE(sat)}	Collector Saturation Voltage		0.3	0.5	V	I _C = 0.5 A, I _B = 0.05 A

Classification of h_{FE}

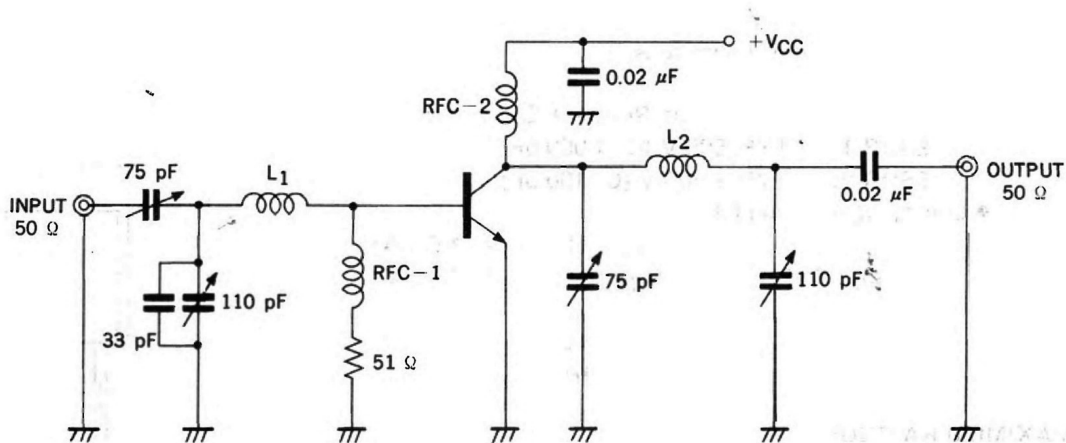
Rank	S	R	Q	K
Range	30 to 60	45 to 90	80 to 200	20 to 200

Test Conditions : V_{CE} = 10 V, I_C = 0.5 A

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)



OUTPUT POWER TEST CIRCUIT (27 MHz)



L_1 : 5T, ϕ 0.4 mm Enameled wire, ϕ 8 mm Bobbin with ferrite rod

L_2 : 4T, ϕ 0.4 mm Enameled wire, ϕ 8 mm Bobbin with ferrite rod

RFC-1: 20T, ϕ 0.4 mm Enameled wire, ϕ 8 mm Bobbin

RFC-2: 17T, ϕ 0.4 mm Enameled wire, ϕ 8 mm Bobbin

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