

SILICON PLANAR PNP

BSS 17 2N5322

GENERAL INFORMATION

TYPICAL APPLICATION: MEDIUM POWER AMPLIFIER

The BSS 17/2N 5322 is a silicon planar epitaxial PNP transistor in a Jedec TO-39 metal case. It is especially intended for high-voltage medium-power applications in industrial and commercial equipments.

The complementary NPN type is the 2N 5320.

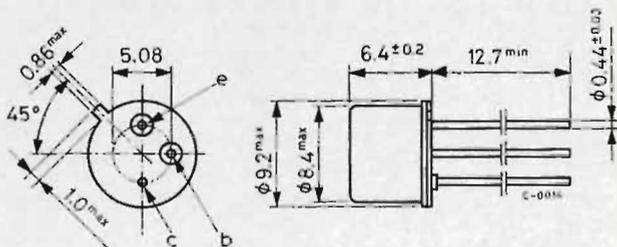
ABSOLUTE MAXIMUM RATINGS

V_{CBO}	Collector-base voltage ($I_E = 0$)	-100	V
$V_{CEO (sus)}$	Collector-emitter voltage ($I_B = 0$)	-75	V
$V_{CEV (sus)}$	Collector-emitter voltage ($V_{BE} = 1.5$ V)	-100	V
V_{EBO}	Emitter-base voltage ($I_C = 0$)	-7	V
I_C	Collector current	-2	A
I_B	Base current	-1	A
P_{tot}	Total power dissipation at $T_a \leq 25^\circ\text{C}$ at $T_c \leq 25^\circ\text{C}$	1 10	W W
T_s	Storage temperature	-65 ÷ 200	$^\circ\text{C}$
T_j	Junction temperature	200	$^\circ\text{C}$

MECHANICAL DATA

Dimensions in mm

Collector connected to case



BSS 17 2N5322

THERMAL DATA

$R_{th\ j-c}$	Thermal resistance junction-case	max	17.5	$^{\circ}\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal resistance junction-ambient	max	175	$^{\circ}\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS ($T_c = 25^{\circ}\text{C}$ unless otherwise specified)

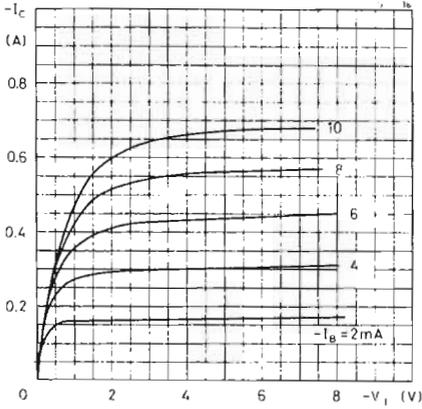
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector cutoff current ($I_E = 0$)			-0.5	μA
I_{EBO}	Emitter cutoff current ($I_C = 0$)			-0.1	μA
V_{EBO}	Emitter-base voltage ($I_C = 0$)		-7		V
$V_{CEO(sus)}$	Collector-emitter voltage ($I_B = 0$)		-75		V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -500\text{ mA}$ $I_B = -50\text{ mA}$		-0.7	V
V_{CEV}	Collector-emitter voltage	$I_C = -0.1\text{ mA}$ $V_{BE} = 1.5\text{ V}$	-100		V
V_{BE}	Base-emitter voltage	$I_C = -500\text{ mA}$ $V_{CE} = -4\text{ V}$		-1.1	V
h_{FE}	DC current gain	$I_C = -500\text{ mA}$ $V_{CE} = -4\text{ V}$ $I_C = -1\text{ A}$ $V_{CE} = -2\text{ V}$	30 10	130	— —
f_T	Transition frequency	$I_C = -50\text{ mA}$ $V_{CE} = -4\text{ V}$	50		MHz
t_{on}	Turn on time	$I_C = -500\text{ mA}$ $V_{CE} = -30\text{ V}$ $I_B = -50\text{ mA}$		100	ns
t_{off}	Turn off time	$I_C = -500\text{ mA}$ $V_{CE} = -30\text{ V}$ $I_B = -50\text{ mA}$		1000	ns
$I_{S/B}^{**}$	Second breakdown collector current	$V_{CE} = -35\text{ V}$	-285		mA

* Pulse conditions

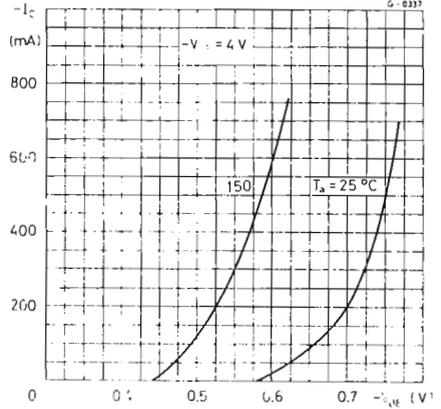
** 0.4 s non repetitive pulse

BSS 17 2N5322

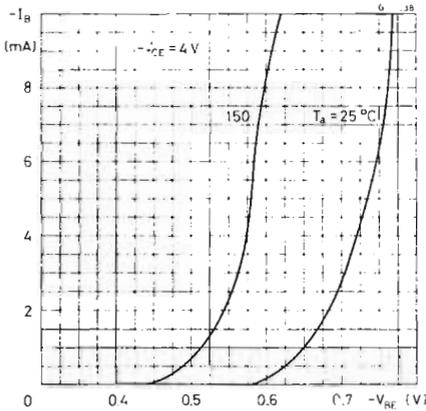
Typical output characteristics



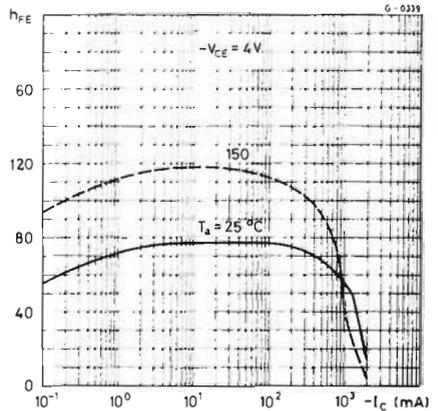
Typical DC transconductance



Typical input characteristics

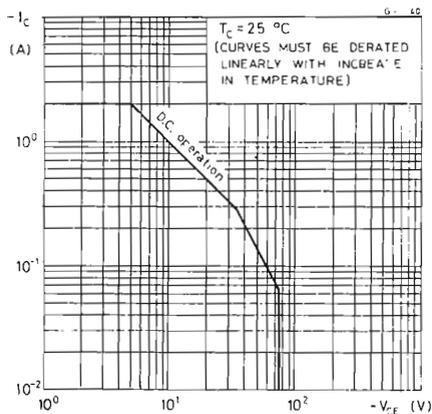


Typical DC current gain



BSS 17 2N5322

Maximum operating areas



TEST CIRCUIT

Switching times test circuit

