BFS 89

SILICON PLANAR **NPN**

NIXIE DRIVER

The BFS 89 is a silicon planar epitaxial NPN transistor in a Jedec TO-39 metal case. It is intended particularly as nixie driver, amplifier and for switching applications.

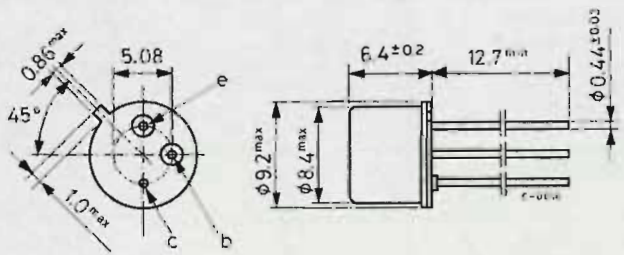
ABSOLUTE MAXIMUM RATINGS

V_{CBO}	Collector-base voltage ($I_E = 0$)	300	V
V_{CEO}	Collector-emitter voltage ($I_B = 0$)	300	V
V_{EBO}	Emitter-base voltage ($I_C = 0$)	5	V
I_C	Collector current	150	mA
I_{CM}	Collector peak current	500	mA
P_{tot}	Total power dissipation at $T_{case} \leq 25$ °C	5	W
T_{stg}	Storage temperature	-55 to 175	°C
T_j	Junction temperature	175	°C

MECHANICAL DATA

Dimensions in mm

Collector connected to case



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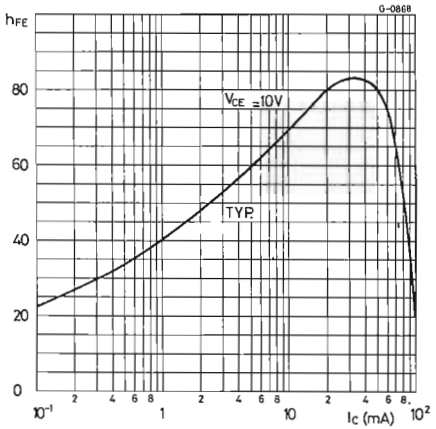
THERMAL DATA

$R_{th\ j-case}$	Thermal resistance junction-case	max	30	°C/W

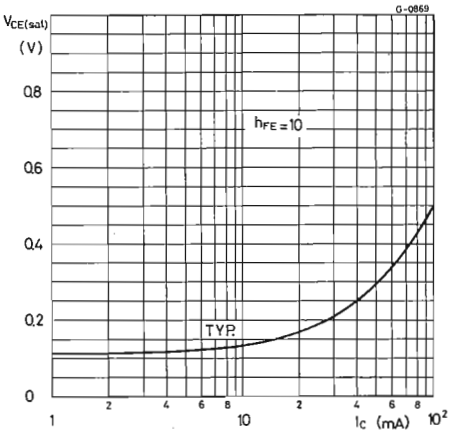
ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C unless otherwise specified)

Parameter		Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector cutoff current (I_E = 0)	V_{CB} = 250 V			50	nA
V_{CBO}	Collector-base voltage (I_E = 0)	I_C = 100 μA	300			V
$V_{CEO(sus)}$	Collector-emitter voltage (I_B = 0)	I_C = 10 mA	300			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C = 30 mA I_B = 6 mA			1	V
h_{FE}	DC current gain	I_C = 50 mA V_{CE} = 10 V	25			—
f_T	Transition frequency	I_C = 30 mA V_{CE} = 10 V		90		MHz
$-C_{re}$	Reverse capacitance	V_{CE} = 30 V f = 1 MHz I_C = 1 mA		3		pF
C_{CBO}	Collector-base capacitance	V_{CB} = 30 V f = 1 MHz I_E = 0		3.5		pF

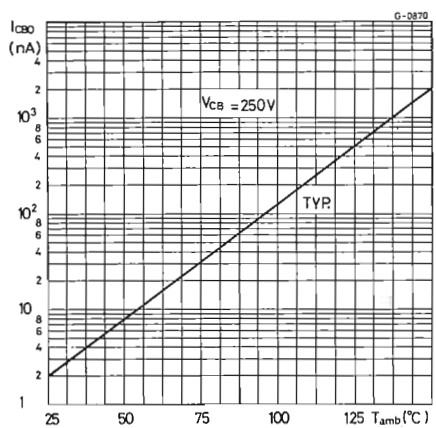
DC current gain



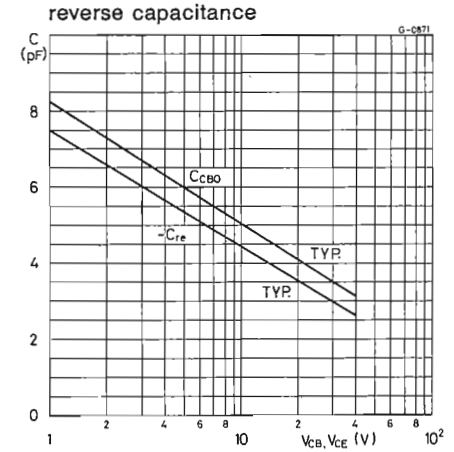
Collector-emitter saturation voltage



Collector cutoff current



Collector-base capacitance, reverse capacitance



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Power rating chart