



NPN SILICON POWER TRANSISTOR

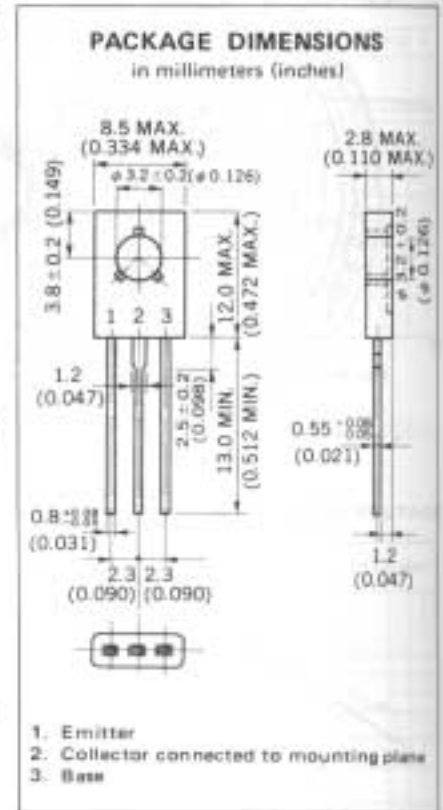
2SC2682

DESCRIPTION The 2SC2682 is designed for use in Audio frequency power amplifier.

- FEATURES**
- High voltage. $V_{CEO} > 180$ V
 - Low C_{ob} , High f_T
 $f_T = 200$ MHz, $C_{ob} = 3.2$ pF
 - Complementary to the NEC 2SA1142 PNP Transistor.

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)	1.2 W
Total Power Dissipation ($T_c = 25$ °C)	10 W
Maximum Voltages and Current ($T_a = 25$ °C)	
V_{CBO} Collector to Base Voltage	180 V
V_{CEO} Collector to Emitter Voltage	180 V
V_{EBO} Emitter to Base Voltage	5.0 V
I_C Collector Current	100 mA



ELECTRICAL CHARACTERISTICS ($T_a = 25$ °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}	DC Current Gain	90	190		-	$V_{CE} = 5.0$ V, $I_C = 1.0$ mA*
h_{FE2}	DC Current Gain	100	200	320	-	$V_{CE} = 5.0$ V, $I_C = 10$ mA*
f_T	Gain Bandwidth Product		200		MHz	$V_{CE} = 10$ V, $I_C = 20$ mA
C_{ob}	Output Capacitance		3.2	5.0	pF	$V_{CB} = 10$ V, $I_E = 0$, $f = 1.0$ MHz
NF	Noise Figure		4.0		dB	$V_{CE} = 10$ V, $I_C = 1.0$ mA, $R_G = 10$ k Ω , $f = 1.0$ kHz
I_{CBO}	Collector Cutoff Current			1.0	μ A	$V_{CB} = 180$ V, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			1.0	μ A	$V_{EB} = 3.0$ V, $I_C = 0$
$V_{CE(sat)}$	Collector Saturation Voltage		0.12	0.5	V	$I_C = 50$ mA, $I_B = 5.0$ mA*
$V_{BE(sat)}$	Base Saturation Voltage		0.8	1.5	V	$I_C = 50$ mA, $I_B = 5.0$ mA*

*Pulse Test : PW \leq 350 μ s, Duty Cycle \leq 2 %

Classification of h_{FE}

Rank	Q	P
Range	100 to 200	160 to 320

Test Conditions : $V_{CE} = 5.0$ V, $I_C = 10$ mA