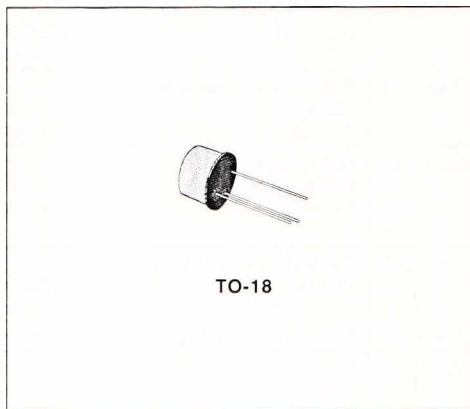
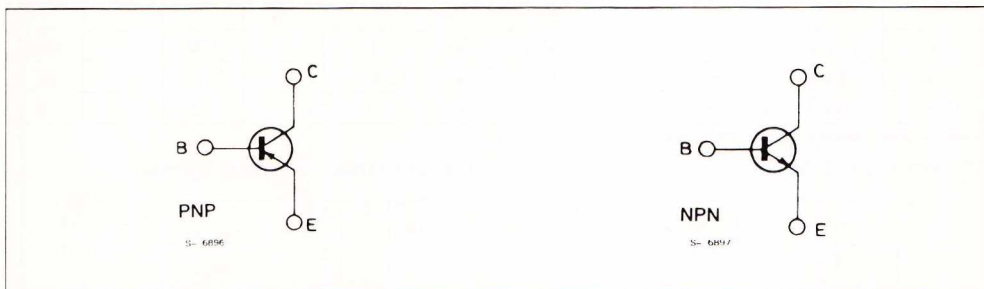


AUDIO DRIVERS
DESCRIPTION

The BC377 and BC378 are silicon planar epitaxial NPN transistors in TO-18 metal case. They are particularly intended for use in high current, high gain applications, in driver stages of hi-fi equipments or in output stages of low power class B amplifiers. The complementary PNP types are the BC297 and BC298 respectively.


INTERNAL SCHEMATIC DIAGRAM

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		BC377	BC378	
V_{CES}	Collector-emitter Voltage ($V_{EB} = 0$)	50	30	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	40	25	V
V_{EB0}	Emitter-base Voltage ($I_C = 0$)	6		V
I_C	Collector Current	1		A
I_B	Base Current	0.2		A
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25^\circ\text{C}$ at $T_{case} \leq 75^\circ\text{C}$	375		W
		1		W
T_{stg}	Storage Temperature	- 65 to 175		$^\circ\text{C}$
T_j	Junction Temperature	175		$^\circ\text{C}$

THERMAL DATA

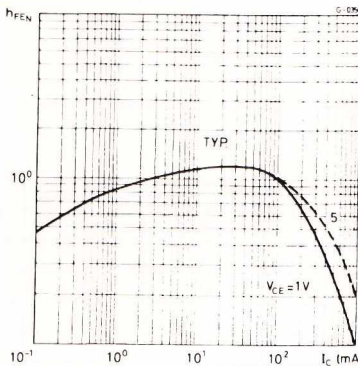
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	100	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	400	°C/W

ELECTRICAL CHARACTERISTICS ($T_{case} = 25\text{ °C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CES}	Collector Cutoff Current ($V_{BE} = 0$)	For BC377 $V_{CE} = 50\text{ V}$ For BC378 $V_{CE} = 30\text{ V}$			15 15	nA nA
$V_{(BR)\ EBO}$	Emitter-base Breakdown Voltage ($I_C = 0$)	$I_E = 10\text{ }\mu\text{A}$	6			V
$V_{(BR)\ CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = 2\text{ mA}$ For BC377 For BC378	40 25			V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$			0.7	V
V_{BE}^*	Base-emitter Voltage	$I_C = 100\text{ mA}$ $V_{CE} = 1\text{ V}$		740		mV
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$			1.2	V
h_{FE}^*	DC Current Gain Gr.7	$I_C = 100\text{ mA}$ $V_{CE} = 1\text{ V}$ $I_C = 100\text{ mA}$ $V_{CE} = 1\text{ V}$ $I_C = 300\text{ mA}$ $V_{CE} = 1\text{ V}$	75 125 35		260 260	
f_T	Transition Frequency	$I_C = 50\text{ mA}$ $V_{CE} = 10\text{ V}$		100		MHz
C_{CBO}	Collector-base Capacitance	$I_E = 0$ $V_{CB} = 10\text{ V}$		10		pF
C_{EBO}	Emitter-base Capacitance	$I_C = 0$ $V_{EB} = 0.5\text{ V}$		30		pF

* Pulsed : pulse duration = 300 μs , duty cycle = 1 %.

DC Normalized Current Gain.



Collector-emitter Saturation Voltage.

