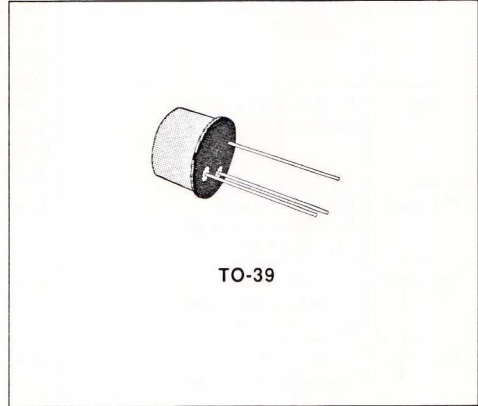




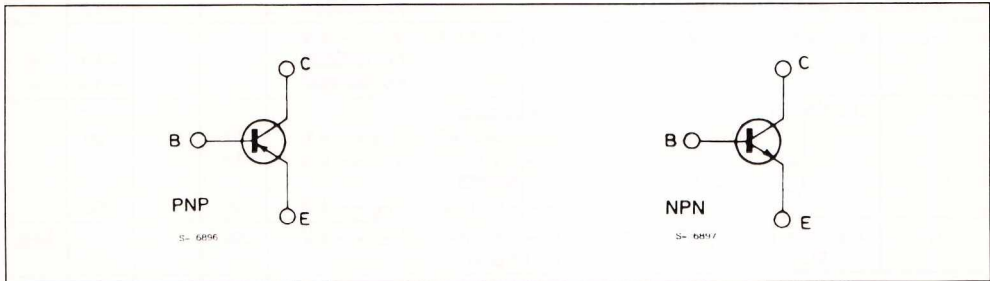
MEDIUM-POWER AMPLIFIERS

DESCRIPTION

The 2N5322 and 2N5323 are silicon planar epitaxial PNP transistors in Jedec TO-39 metal case. They are especially intended for high-voltage medium power applications in industrial and commercial equipments.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		2N5322	2N5323	
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 100	- 75	V
V_{CEV}	Collector-emitter Voltage ($V_{BE} = 1.5$ V)	- 100	- 75	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	- 75	- 50	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	- 6	- 5	V
I_C	Collector Current	- 2		A
I_B	Base Current	- 1		A
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25$ °C at $T_{case} \leq 25$ °C	1		W
		10		W
T_{stg}, T_j	Storage and Junction Temperature	- 65 to 200		°C

THERMAL DATA

$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	17.5	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	For 2N5322 $V_{CB} = -80\text{ V}$ For 2N5323 $V_{CB} = -60\text{ V}$			- 0.5 - 5	μA μA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	For 2N5322 $V_{EB} = -5\text{ V}$ For 2N5323 $V_{EB} = -4\text{ V}$		- 0.1 - 0.5		μA μA
$V_{(BR)CEV}$	Collector-emitter Breakdown Voltage ($V_{BE} = 1.5\text{ V}$)	$I_C = -0.1\text{ mA}$ For 2N5322 For 2N5323	- 100 - 75			V V
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = -10\text{ mA}$ For 2N5322 For 2N5323	- 75 - 50			V V
$V_{(BR)EBO}$	Emitter-base Breakdown Voltage ($I_C = 0$)	$I_E = -0.1\text{ mA}$ For 2N5322 For 2N5323	- 6 - 5			V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -500\text{ mA}$ $I_B = -50\text{ mA}$ For 2N5322 For 2N5323			- 0.7 - 1.2	V V
V_{BE}^*	Base-emitter Voltage	$I_C = -500\text{ mA}$ $V_{CE} = -4\text{ V}$ For 2N5322 For 2N5323			- 1.1 - 1.4	V V
h_{FE}^*	DC Current Gain	For 2N5322 $I_C = -500\text{ mA}$ $V_{CE} = -4\text{ V}$ $I_C = -1\text{ A}$ $V_{CE} = -2\text{ V}$ For 2N5323 $I_C = -500\text{ mA}$ $V_{CE} = -4\text{ V}$	30 10 40		130 250	
f_T	Transition Frequency	$I_C = -50\text{ mA}$ $V_{CE} = -4\text{ V}$ $f = 10\text{ MHz}$	50			MHz
t_{on}	Turn-on Time	$I_C = -500\text{ mA}$ $V_{CC} = -30\text{ V}$ $I_{B1} = -50\text{ mA}$			100	ns
t_{off}	Turn-off Time	$I_C = -500\text{ mA}$ $V_{CC} = -30\text{ V}$ $I_{B1} = -I_{B2} = -50\text{ mA}$			1000	ns

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