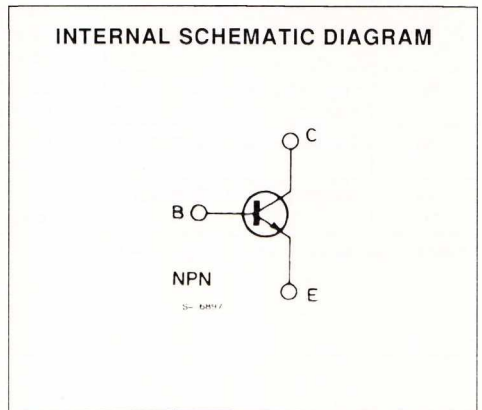
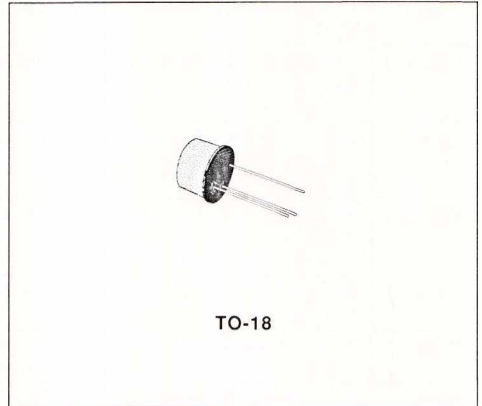


HIGH VOLTAGE GENERAL PURPOSE

DESCRIPTION

The 2N720A is a silicon planar epitaxial NPN transistor in Jedec TO-18 metal case. It is suitable for a wide variety of amplifier and switching applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	120	V
V_{CEO}	Collector-emitter Voltage ($I_R = 0$)	80	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	7	V
I_C	Collector Current	500	mA
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25^\circ\text{C}$	0.5	W
	at $T_{case} \leq 25^\circ\text{C}$	1.8	W
T_{stg}, T_j	Storage and Junction Temperature	- 65 to 200	$^\circ\text{C}$

THERMAL DATA

$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	97.2	$^{\circ}C/W$
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	350	$^{\circ}C/W$

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

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = 90\ V$			10	nA
$V_{(BR)CBO}$	Collector–base Breakdown Voltage ($I_E = 0$)	$I_C = 100\ \mu A$	120			V
$V_{(BR)CEO}^*$	Collector–emitter Breakdown Voltage ($I_B = 0$)	$I_C = 30\ mA$	80			V
$V_{(BR)EBO}$	Emitter–base Breakdown Voltage ($I_E = 0$)	$I_E = 100\ \mu A$	7			V
I_{EBO}	Emitter Cutoff Current ($I_E = 0$)	$V_{EB} = 5\ V$			10	nA
$V_{CE(sat)}^*$	Collector–emitter Saturation Voltage	$I_C = 50\ mA$ $I_B = 5\ mA$ $I_C = 150\ mA$ $I_B = 15\ mA$			1.2 5	V V
$V_{BE(sat)}^*$	Base–emitter Saturation Voltage	$I_C = 50\ mA$ $I_B = 5\ mA$ $I_C = 150\ mA$ $I_B = 15\ mA$			0.9 1.3	V V
h_{FE}^*	DC Current Gain	$I_C = 100\ \mu A$ $V_{CE} = 10\ V$ $I_C = 10\ mA$ $V_{CE} = 10\ V$ $I_C = 150\ mA$ $V_{CE} = 10\ V$	20 35 40		120	– – –
h_{fe}	High Frequency Current Gain	$I_C = 50\ mA$ $V_{CE} = 10\ V$ $f = 20\ MHz$	2.5			–
C_{CBO}	Collector–base Capacitance	$I_E = 0$ $V_{CB} = 10\ V$ $f = 1\ MHz$			15	pF
C_{EBO}	Emitter–base Capacitance	$I_C = 0$ $V_{EB} = 0.5\ V$ $f = 1\ MHz$			85	pF

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