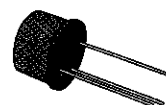


HIGH VOLTAGE GENERAL PURPOSE

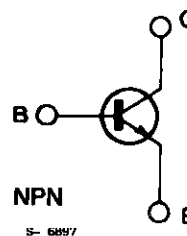
DESCRIPTION

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.



TO-18

INTERNAL SCHEMATIC DIAGRAM



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 $T_{amb} \leq 25^\circ\text{C}$ at $T_{case} \leq 25^\circ\text{C}$	0.5	W
		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	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	350	°C/W

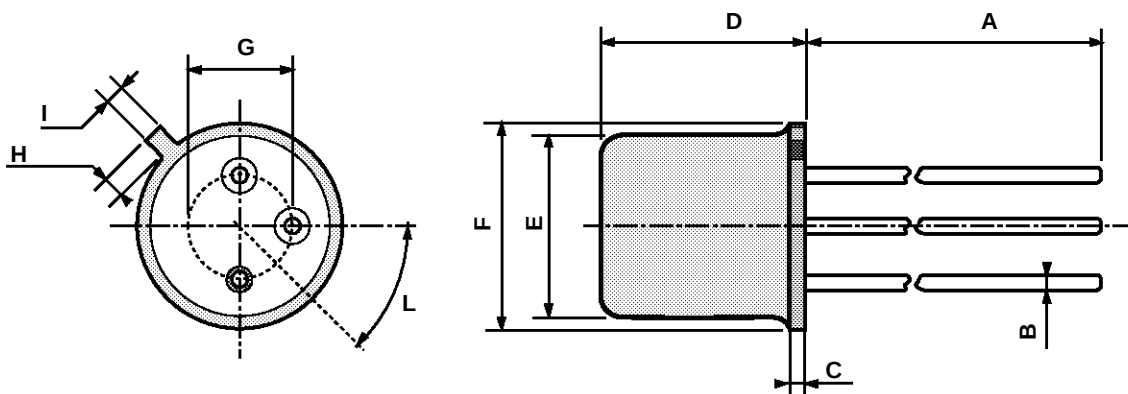
ELECTRICAL CHARACTERISTICS($T_{amb} = 25\text{ °C}$ unless otherwise specified)

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

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

TO-18 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		12.7			0.500	
B			0.49			0.019
D			5.3			0.208
E			4.9			0.193
F			5.8			0.228
G	2.54			0.100		
H			1.2			0.047
I			1.16			0.045
L	45°			45°		



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