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2N720A

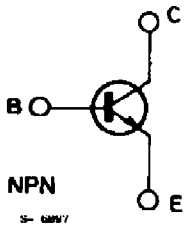
HIGH VOLTAGE GENERAL PURPOSE

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 $T_{amb} \leq 25$ °C at $T_{case} \leq 25$ °C	0.5 1.8	W W
T_{stg}, T_j	Storage and Junction Temperature	– 65 to 200	°C

THERMAL DATA

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

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °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 µA		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 µA		7			V
I_{EBO}	Emitter Cuttoff Current (I_E = 0)	V_{EB} = 5 V				10	nA
$V_{CE(sat)}$*	Collector–emitter Saturation Voltage	I_C = 50 mA I_C = 150 mA	I_B = 5 mA I_B = 15 mA			1.2 5	V V
$V_{BE(sat)}$*	Base–emitter Saturation Voltage	I_C = 50 mA I_C = 150 mA	I_B = 5 mA I_B = 15 mA			0.9 1.3	V V
h_{FE}*	DC Current Gain	I_C = 100 µA I_C = 10 mA I_C = 150 mA	V_{CE} = 10 V V_{CE} = 10 V V_{CE} = 10 V	20 35 40		 120	– – –
h_{fe}	High Frequency Current Gain	I_C = 50 mA f = 20 MHz	V_{CE} = 10 V	2.5			–
C_{CBO}	Collector–base Capacitance	I_E = 0 f = 1 MHz	V_{CB} = 10 V			15	pF
C_{EBO}	Emitter–base Capacitance	I_C = 0 f = 1 MHz	V_{EB} = 0.5 V			85	pF

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