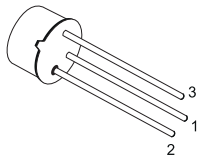
2N720A

EPITAXIAL PLANAR NPN

- HIGH VOLTAGE GENERAL PURPOSE

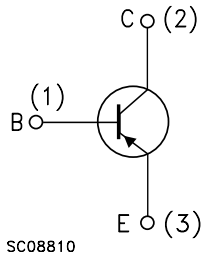
DESCRIPTION

The 2N790A 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_B = 0)	80	V
V_{EBO}	Emitter-Base Voltage (I_C = 0)	7	V
I_C	Collector Current	500	mA
P_{tot}	Total Dissipation at $T_{amb} \leq 25\ ^oC$ at $T_C \leq 25\ ^oC$	0.5 1.8	W W
T_{stg}	Storage Temperature	-55 to 175	^oC
T_j	Max. Operating Junction Temperature	175	^oC

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-Case	Max	83.3	$^oC/W$
$R_{thj\text{-}amb}$	Thermal Resistance Junction-Ambient	Max	300	$^oC/W$

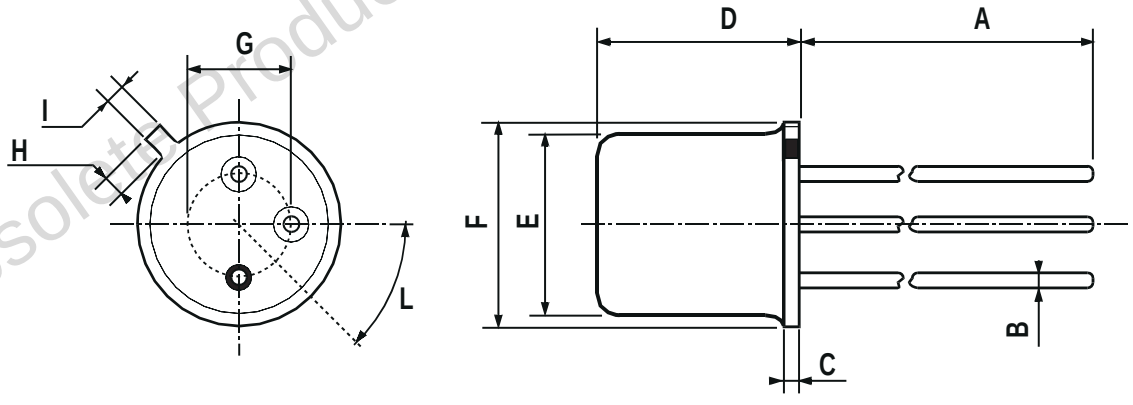
ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^oC unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off 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_C = 0)	I_E = 100 µA	7			V
I_{EBO}	Emitter Cut-off 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 µA 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}*	Small Signal 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 %

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^o			45^o		



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