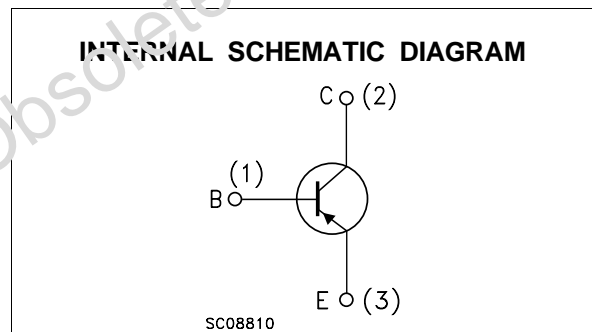
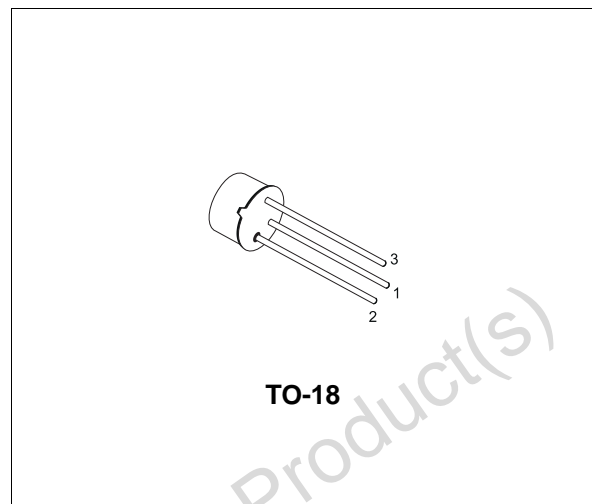


## EPITAXIAL PLANAR NPN

■ 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.



**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 $T_{amb} \leq 25\text{ }^\circ\text{C}$ at $T_C \leq 25\text{ }^\circ\text{C}$	0.5	W
		1.8	W
$T_{stg}$	Storage Temperature	-55 to 175	$^\circ\text{C}$
$T_j$	Max. Operating Junction Temperature	175	$^\circ\text{C}$

## 2N720A

### THERMAL DATA

R <sub>thj-case</sub>	Thermal Resistance Junction-Case	Max	83.3	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-Ambient	Max	300	°C/W

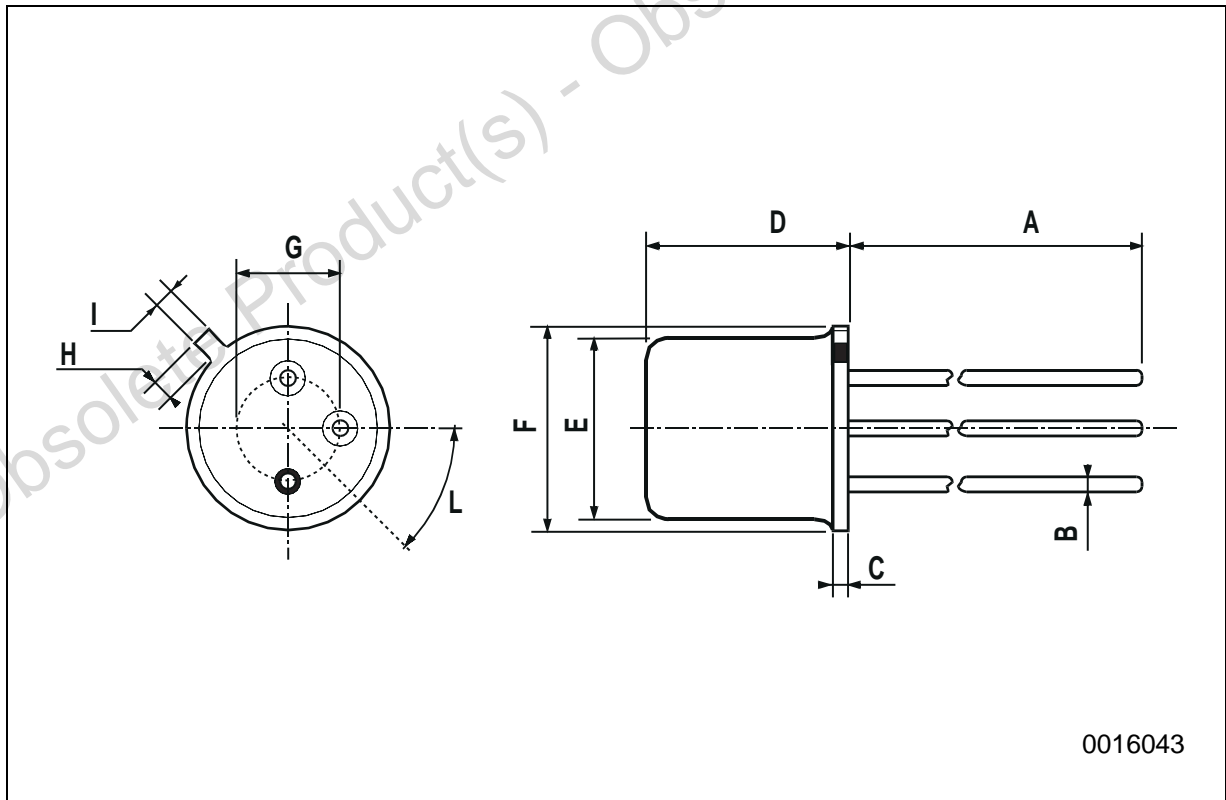
### ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>CBO</sub>	Collector Cut-off Current (I <sub>E</sub> = 0)	V <sub>CB</sub> = 90 V			10	nA
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>E</sub> = 0)	I <sub>C</sub> = 100 μA	120			V
V <sub>(BR)CEO*</sub>	Collector-Emitter Breakdown Voltage (I <sub>B</sub> = 0)	I <sub>C</sub> = 30 mA	80			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>C</sub> = 0)	I <sub>E</sub> = 100 μA	7			V
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>E</sub> = 0)	V <sub>EB</sub> = 5 V			10	nA
V <sub>CE(sat)*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 50 mA I <sub>C</sub> = 150 mA	I <sub>B</sub> = 5 mA I <sub>B</sub> = 15 mA		1.2 5	V V
V <sub>BE(sat)*</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 50 mA I <sub>C</sub> = 150 mA	I <sub>B</sub> = 5 mA I <sub>B</sub> = 15 mA		0.9 1.3	V V
h <sub>FE*</sub>	DC Current Gain	I <sub>C</sub> = 100 μA I <sub>C</sub> = 10 mA I <sub>C</sub> = 150 mA	V <sub>CE</sub> = 10 V V <sub>CE</sub> = 10 V V <sub>CE</sub> = 10 V	20 35 40	120	
h <sub>fe*</sub>	Small Signal Current Gain	I <sub>C</sub> = 50 mA f = 20 MHz	V <sub>CE</sub> = 10 V	2.5		
C <sub>CB0</sub>	Collector-Base Capacitance	I <sub>E</sub> = 0 V <sub>CB</sub> = 10 V f = 1 MHz			15	pF
C <sub>EBO</sub>	Emitter-Base Capacitance	I <sub>C</sub> = 0 V <sub>EB</sub> = 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°			45°		



Obsolete Product(s) - Obsolete Product(s)

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