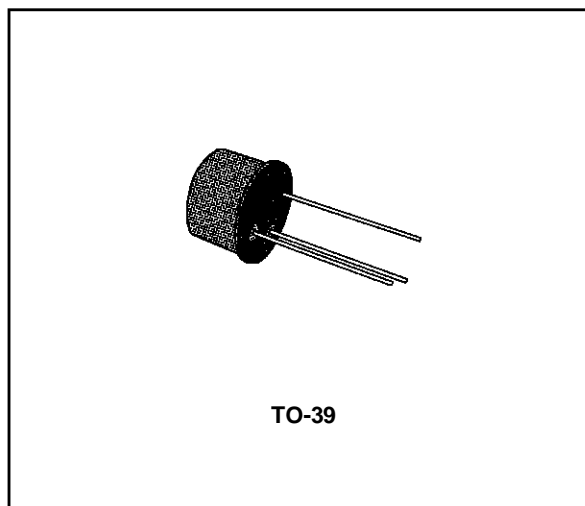


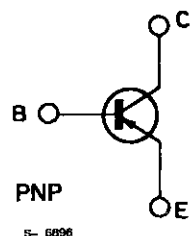
## HIGH-VOLTAGE AMPLIFIER

### DESCRIPTION

The 2N5415S is a silicon planar epitaxial PNP transistor in Jedec TO-39 metal case, intended for high voltage switching and linear amplifier applications.



### INTERNAL SCHEMATIC DIAGRAM



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-base Voltage ( $I_E = 0$ )	- 200	V
$V_{CEO}$	Collector-emitter Voltage ( $I_B = 0$ )	- 200	V
$V_{EBO}$	Emitter-base Voltage ( $I_C = 0$ )	- 4	V
$I_{CM}$	Collector Peak Current	- 1	A
$P_{tot}$	Total Power Dissipation at $T_{amb} \leq 25\text{ }^{\circ}\text{C}$ at $T_{case} \leq 25\text{ }^{\circ}\text{C}$	1	W
		10	W
$T_{stg}, T_j$	Storage and Junction Temperature	- 55 to 200	$^{\circ}\text{C}$

## THERMAL DATA

$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	17.5	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

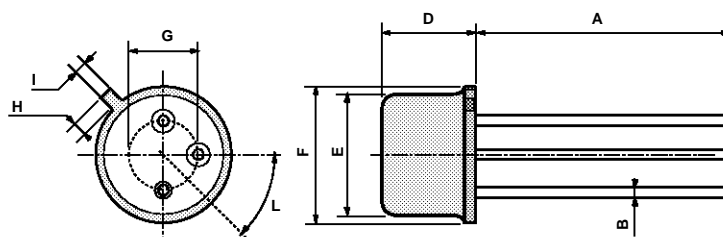
ELECTRICAL CHARACTERISTICS ( $T_{amb} = 25\text{ °C}$  unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$	Collector Cutoff Current ( $I_E = 0$ )	$V_{CB} = -175\text{ V}$			- 50	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current ( $I_B = 0$ )	$V_{CE} = -150\text{ V}$			- 50	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current ( $I_C = 0$ )	$V_{EB} = -4\text{ V}$			- 20	$\mu\text{A}$
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ( $I_B = 0$ )	$I_C = -2\text{ mA}$	- 200			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -50\text{ mA}$ $I_B = -5\text{ mA}$			- 2.5	V
$V_{BE}^*$	Base-Emitter Voltage	$I_C = -50\text{ mA}$ $V_{CE} = -10\text{ V}$			- 1.5	V
$h_{FE}^*$	DC Current Gain	$I_C = -50\text{ A}$ $V_{CE} = -10\text{ V}$	30		150	
$f_T$	Transition Frequency	$I_C = -10\text{ mA}$ $V_{CE} = -10\text{ V}$ $f = 5\text{ MHz}$	15			MHz
$C_{CBO}$	Collector-base Capacitance	$I_E = 0$ $V_{CB} = -10\text{ V}$ $f = 1\text{ MHz}$			15	pF

\* Pulsed : pulse duration = 300  $\mu\text{s}$ , duty cycle = 1 %.

## TO39 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	12.7			0.500		
B			0.49			0.019
D			6.6			0.260
E			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
H			1.2			0.047
I			0.9			0.035
L	45° (typ.)					



P008B

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