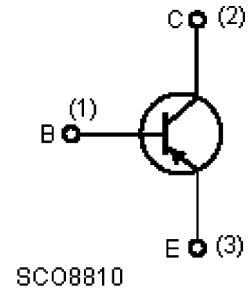


Internal Schematic Diagram



Description:

The 2N5415 are high voltage silicon epitaxial planar PNP transistors in JEDEC TO-39 metal case designed for use in consumer and industrial line-operated applications.

These devices are particularly suited as drivers in high-voltage low current inverters, switching and series regulators.

Feature:

- PNP transistors

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage ($I_E = 0$)	V_{CBO}	-200	V
Collector-Emitter Voltage ($I_B = 0$)	V_{CEO}		
Emitter-Base Voltage ($I_C = 0$)	V_{EBO}		
Collector Current	I_C	-1	A
Base Current	I_B	-0.5	
Total Dissipation at $T_C \leq 25^\circ\text{C}$	P_{tot}	10	W
Total Dissipation at $T_a \leq 50^\circ\text{C}$		1	
Storage Temperature	T_{stg}	-65 to 200	$^\circ\text{C}$

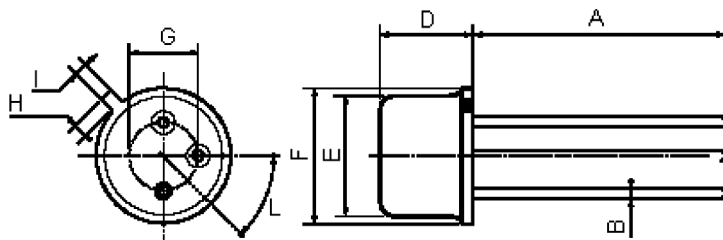
Thermal Data

Parameter	Symbol	Value	Unit
Maximum Thermal Resistance Junction-case	$R_{thj-case}$	17.5	°C/W
Maximum Thermal Resistance Junction-ambient	R_{thj-a}	175	

Electrical Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Collector Cut-off Current ($I_E = 0$)	2N5415 $V_{CB} = -175\text{V}$	I_{CBO}	-	-	-50	μA
Collector Cut-off Current ($I_B = 0$)	$V_{CE} = -150\text{V}$	I_{CEO}	-	-	-50	
Emitter Cut-off Current ($I_C = 0$)	2N5415 $V_{EB} = -4\text{V}$	I_{EBO}	-	-	-20	
Collector-Emitter Sustaining Voltage	2N5415 $I_C = -10\text{mA}$	V_{CEO}^* (sus)	-200	-	-	V
Collector-Emitter Saturation Voltage	$I_C = -50\text{mA}$ $I_B = -5\text{mA}$	$V_{CE(sat)}^*$	-	-	-2.5	
Base-Emitter Voltage	$I_C = -50\text{mA}$ $V_{CE} = -10\text{V}$	V_{BE}^*	-	-	1.5	
DC Current Gain	2N5415 $I_C = -50\text{mA}$ $V_{CE} = -10\text{V}$	h_{FE}^*	30	-	150	-
Small Signal Current Gain	$I_C = -5\text{mA}$ $V_{CE} = -10\text{V}$ $f = 1\text{KHz}$	h_{fe}	25	-	-	-
Transition frequency	$I_C = -10\text{mA}$ $V_{CE} = -10\text{V}$ $f = 5\text{MHz}$	f_T	15	-	-	MHz
Collector Base Capacitance	$I_E = 0$ $V_{CB} = -10\text{V}$ $f = 1\text{MHz}$	C_{CBO}	-	-	25	pF

*Pulsed: Pulse Duration = 300ms, Duty Cycle 1.5%.



TO-39 Mechanical Data

Dimension	mm			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	12.7	-	-	0.5	-	-
B	-	-	0.49	-	-	0.019
D	-	-	6.6	-	-	0.26
E	-	-	8.5	-	-	0.334
F	-	-	9.4	-	-	0.37
G	5.08	-	-	0.2	-	-
H	-	-	1.2	-	-	0.047
I	-	-	0.9	-	-	0.035
L	45° (Typical)					

Part Number Table

Description	Part Number
Transistor	2N5415

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