



**PRODUCT NAME** : 2N5416 PNP General Purpose Transistor

**PRICE** : Rs 49.00

**SKU** : RM2095



## DESCRIPTION

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## Features

- Collector-Emitter Volt ( $V_{ce0}$ ): 300V
- Collector-Base Volt ( $V_{cb0}$ ): 350V
- Collector Current ( $I_c$ ): 1.0A
- $h_{fe}$ : 30-120 @ 50mA
- Power Dissipation ( $P_{tot}$ ): 1000mW
- Current-Gain-Bandwidth ( $f_{total}$ ): 15MHz
- Type: NPN



**2N5415**  
**2N5416**

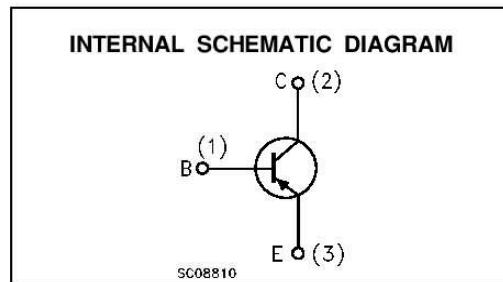
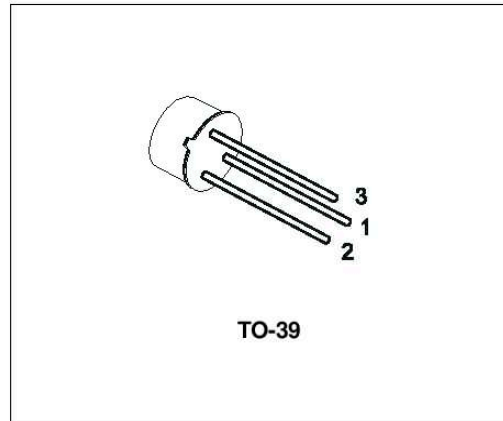
## SILICON PNP TRANSISTORS

- SGS-THOMSON PREFERRED SALESTYPES
- PNP TRANSISTOR

### DESCRIPTION

The 2N5415, 2N5416 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.



### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		2N5415	2N5416	
V <sub>CB0</sub>	Collector-Base Voltage (I <sub>E</sub> = 0)	-200	-350	V
V <sub>CE0</sub>	Collector-Emitter Voltage (I <sub>B</sub> = 0)	-200	-300	V
V <sub>EB0</sub>	Emitter-Base Voltage (I <sub>C</sub> = 0)	-4	-6	V
I <sub>C</sub>	Collector Current	-1		A
I <sub>B</sub>	Base Current	-0.5		A
P <sub>tot</sub>	Total Dissipation at T <sub>c</sub> ≤ 25 °C	10		W
P <sub>tot</sub>	Total Dissipation at T <sub>amb</sub> ≤ 50 °C	1		W
T <sub>stg</sub>	Storage Temperature	-65 to 200		°C
T <sub>j</sub>	Max. Operating Junction Temperature	200		°C

**2N5415 / 2N5416**

**THERMAL DATA**

R <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	17.5	°C/W
R <sub>thj-amb</sub>	Thermal Resistance Junction-ambient	Max	175	°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)	for <b>2N5415</b> V <sub>CB</sub> = -175 V for <b>2N5416</b> V <sub>CB</sub> = -280 V			-50 -50	μA μA
I <sub>CEO</sub>	Collector Cut-off Current (I <sub>B</sub> = 0)	V <sub>CE</sub> = -150 V			-50	μA
I <sub>EBO</sub>	Emitter Cut-off Current (I <sub>C</sub> = 0)	for <b>2N5415</b> V <sub>EB</sub> = -4 V for <b>2N5416</b> V <sub>EB</sub> = -6 V			-20 -20	μA μA
V <sub>CEER*</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -50 mA R <sub>BE</sub> = 50Ω for <b>2N5416</b>	-350			V
V <sub>CEO(sus)*</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -10 mA for <b>2N5415</b> for <b>2N5416</b>	-200 -300			V V
V <sub>CE(sat)*</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -50 mA I <sub>B</sub> = -5 mA			-2.5	V
V <sub>BE*</sub>	Base-Emitter Voltage	I <sub>C</sub> = -50 mA V <sub>CE</sub> = -10 V			-1.5	V
h <sub>FE*</sub>	DC Current Gain	I <sub>C</sub> = -50 mA V <sub>CE</sub> = -10 V for <b>2N5415</b> for <b>2N5416</b>	30 30		150 120	
h <sub>fe</sub>	Small Signal Current Gain	I <sub>C</sub> = -5 mA V <sub>CE</sub> = -10 V f = 1KHz	25			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> = -10 mA V <sub>CE</sub> = -10 V f = 5MHz	15			MHz
C <sub>CBO</sub>	Collector Base Capacitance	I <sub>E</sub> = 0 V <sub>CB</sub> = -10 V f = 1MHz			25	pF

\* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

