

## PNP 2N5415 - 2N5416

## **HIGH VOLTAGE TRANSISTORS**

The 2N5415 and 2N5416 are PNP transistors mounted in TO-39 metal case . They are intended for use in high-voltage switching and linear amplifier applications. Compliance to RoHS

#### **ABSOLUTE MAXIMUM RATINGS**

Symbol	Ratings			Value	Unit	
V	Collector-Emitter Voltage (I <sub>b</sub> = 0)		2N5415	-200	V	
V <sub>CEO</sub>			2N5416	-300	V	
V	Collector Bose Voltage (I 0)		2N5415	-200	V	
$V_{CBO}$ Collector-Base Voltage ( $I_e = 0$ )			2N5416	-350	V	
V	Emitter-Base Voltage (I <sub>c</sub> = 0)		2N5415	-4	V	
V <sub>EBO</sub>			2N5416	-6	V I	
	Collector Current		2N5415	-200	mΛ	
I <sub>C</sub>			2N5416	-200	mA	
I <sub>CM</sub>	Peak Collector Current		2N5415	-400	mA	
ICM .			2N5416	-400		
I <sub>BM</sub>	Peak Base Current		2N5415	-200	mA	
•BM			2N5416	200		
P <sub>D</sub>	Total Power Dissipation $ T_{case} = 25^{\circ} C $ $ 2N5416 $ $ T_{case} = 25^{\circ} C $ $ 2N5416 $ $ 2N5416 $	T <sub>amb</sub> = 50℃	2N5415	- 1	W	
			10			
		r case — 20 0			<u> </u>	
TJ	Junction Temperature		2N5415	200	C	
- J	oundion remperature		2N5416	200		
T <sub>Stg</sub>	Storage Temperature Range		2N5415	-65 to +200	C	
· Sty			2N5416	00 10 1200		
T <sub>amb</sub>	Operating Ambient Temperature		2N5415	-65 to +150	°C	
• amb			2N5416	00 10 1 100		

## THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit	
R <sub>thJ-a</sub>	Thermal Resistance, Junction to ambient	150	€\M	
R <sub>thJ-c</sub>	Thermal Resistance, Junction to case	17.5	€\M	



## PNP 2N5415 - 2N5416

## **ELECTRICAL CHARACTERISTICS**

TC=25℃ unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Тур	Max	Unit
I <sub>CBO</sub>	Collector Cutoff	$V_{CB} = -175 \text{ V}, I_{E} = 0$	2N5415	-	-	-50	μA
050	Current	$V_{CB} = -280 \text{ V}, I_{E} = 0$	2N5416				I -
I <sub>EBO</sub>	Emitter Cutoff Current	$V_{EB} = -4 \text{ V}, I_{C} = 0$	2N5415	-	-	-20	μΑ
		$V_{EB} = -6 \text{ V}, I_{C} = 0$	2N5416				
V <sub>CEO</sub>	Collector Emitter Breakdown Voltage (*)	$I_C = -10 \text{ mA}, I_B = 0$	2N5415	-200	ı	-	V
			2N5416	-300	-	-	
h	DC Current Gain (*)	$I_C = -50 \text{ mA}$	2N5415	30	-	150	_
h <sub>FE</sub>		$V_{CE} = -10 \text{ V}$	2N5416	30	-	120	
V	Collector-Emitter	$I_C = -50 \text{ mA}$	2N5415	-	-	-2.5	V
V <sub>CE(SAT)</sub>	saturation Voltage (*)	$I_B = -5 \text{ mA}$	2N5416				
VDE	Base-Emitter Voltage (*)	$I_{\rm C} = -50  \text{mA}$	2N5415	-	-	-1.5	V
		$V_{CE} = -10 \text{ V}$	2N5416				
f <sub>T</sub>	Transition frequency	$I_C = -10 \text{ mA}$	2N5415	15	-	-	MHz
		$V_{CE} = -10 \text{ V}, f = 5 \text{ MHz}$	2N5416				
C <sub>c</sub>	Collector Capacitance	$I_E = i_e = 0, V_{CB} = -10 \text{ V}$	2N5415	_	1	15	pF
		f = 1 MHz	2N5416				
C <sub>e</sub>	Emitter Capacitance	$I_C = i_c = 0, V_{EB} = -6 \text{ V}$	2N5415	-	-	75	ъГ
		f = 1 MHz	2N5416				pF

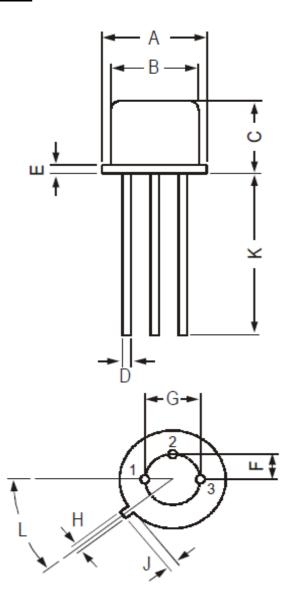
<sup>(\*)</sup> Pulse conditions : tp < 300  $\mu$ s,  $\delta$  =1.5%



# PNP 2N5415 - 2N5416 MECHANICAL DATA CASE TO-39

DIMENSIONS (mm)				
	min	max		
Α	8.50	9.39		
В	7.74	8.50		
С	6.09	6.60		
D	0.40	0.53		
Е	-	0.88		
F	2.41	2.66		
G	4.82	5.33		
Н	0.71	0.86		
J	0.73	1.02		
K	12.70	-		
L	42° 48°			

Pin 1 :	Emitter
Pin 2 :	Base
Pin 3:	Collector
Case :	Collector



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