

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_{CEO}	Collector-Emitter Voltage ($I_b = 0$)	2N5415	-200	V
		2N5416	-300	
V_{CBO}	Collector-Base Voltage ($I_e = 0$)	2N5415	-200	V
		2N5416	-350	
V_{EBO}	Emitter-Base Voltage ($I_c = 0$)	2N5415	-4	V
		2N5416	-6	
I_C	Collector Current	2N5415	-200	mA
		2N5416		
I_{CM}	Peak Collector Current	2N5415	-400	mA
		2N5416		
I_{BM}	Peak Base Current	2N5415	-200	mA
		2N5416		
P_D	Total Power Dissipation	$T_{amb} = 50^{\circ}C$	2N5415	1
			2N5416	
		$T_{case} = 25^{\circ}C$	2N5415	10
			2N5416	
T_J	Junction Temperature	2N5415	200	$^{\circ}C$
		2N5416		
T_{Stg}	Storage Temperature Range	2N5415	-65 to +200	$^{\circ}C$
		2N5416		
T_{amb}	Operating Ambient Temperature	2N5415	-65 to +150	$^{\circ}C$
		2N5416		

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-a}	Thermal Resistance, Junction to ambient	150	$^{\circ}C/W$
R_{thJ-c}	Thermal Resistance, Junction to case	17.5	$^{\circ}C/W$

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

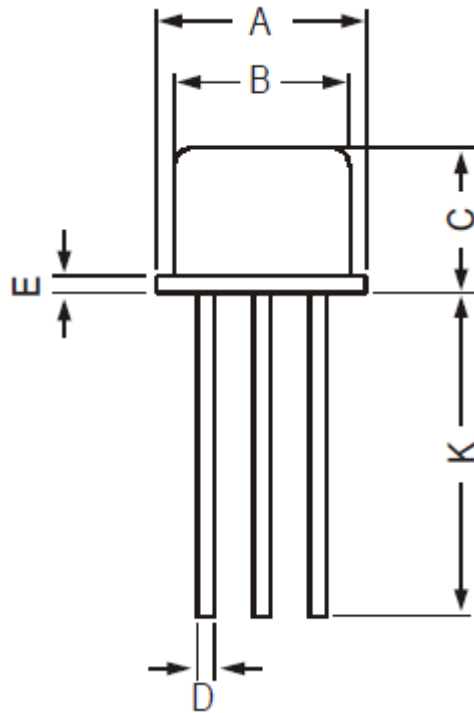
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
I_{CBO}	Collector Cutoff Current	$V_{CB} = -175\text{ V}, I_E = 0$	2N5415	-	-	-50	μA
		$V_{CB} = -280\text{ V}, I_E = 0$	2N5416	-	-	-	-
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -4\text{ V}, I_C = 0$	2N5415	-	-	-20	μA
		$V_{EB} = -6\text{ V}, I_C = 0$	2N5416	-	-	-	-
V_{CEO}	Collector Emitter Breakdown Voltage (*)	$I_C = -10\text{ mA}, I_B = 0$	2N5415	-200	-	-	V
			2N5416	-300	-	-	
h_{FE}	DC Current Gain (*)	$I_C = -50\text{ mA}$ $V_{CE} = -10\text{ V}$	2N5415	30	-	150	-
			2N5416	30	-	120	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C = -50\text{ mA}$ $I_B = -5\text{ mA}$	2N5415	-	-	-2.5	V
			2N5416	-	-	-	
V_{BE}	Base-Emitter Voltage (*)	$I_C = -50\text{ mA}$ $V_{CE} = -10\text{ V}$	2N5415	-	-	-1.5	V
			2N5416	-	-	-	
f_T	Transition frequency	$I_C = -10\text{ mA}$ $V_{CE} = -10\text{ V}, f = 5\text{ MHz}$	2N5415	15	-	-	MHz
			2N5416				
C_c	Collector Capacitance	$I_E = i_e = 0, V_{CB} = -10\text{ V}$ $f = 1\text{ MHz}$	2N5415	-	-	15	μF
			2N5416				
C_e	Emitter Capacitance	$I_C = i_c = 0, V_{EB} = -6\text{ V}$ $f = 1\text{ MHz}$	2N5415	-	-	75	μF
			2N5416				

(*) Pulse conditions : $t_p < 300\ \mu\text{s}, \delta = 1.5\%$

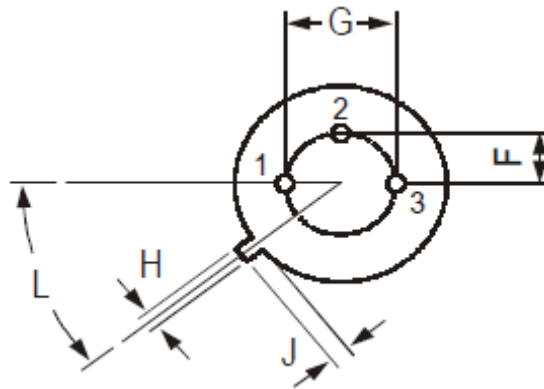
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MECHANICAL DATA CASE TO-39

DIMENSIONS (mm)		
	min	max
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	-	0.88
F	2.41	2.66
G	4.82	5.33
H	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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