

2N5415 2N5416

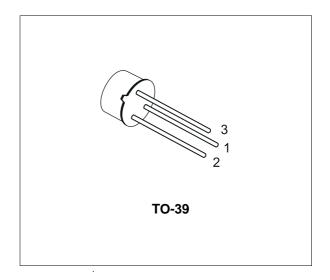
SILICON PNP TRANSISTORS

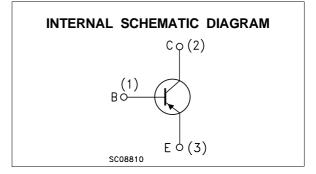
- STMicroelectronics PREFERRED SALESTYPES
- PNP TRANSISTORS

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	Va	Value		
		2N5415	2N5416		
V _{CBO}	Collector-Base Voltage $(I_E = 0)$	-200	-350	V	
VCEO	Collector-Emitter Voltage (I _B = 0)	-200	-300	V	
V _{EBO}	Emitter-Base Voltage (I _C = 0)	-4	-6	V	
Ι _C	Collector Current		-1		
Ι _Β	Base Current	-(-0.5		
P _{tot}	Total Dissipation at $T_c \le 25$ °C		10		
P _{tot}	Total Dissipation at $T_{amb} \le 50$ °C		1		
T _{stg}	Storage Temperature -65 to 200		°C		

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THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	17.5	°C/W
R _{thj-amb}	Thermal Resistance Junction-ambient	Max	175	°C/W

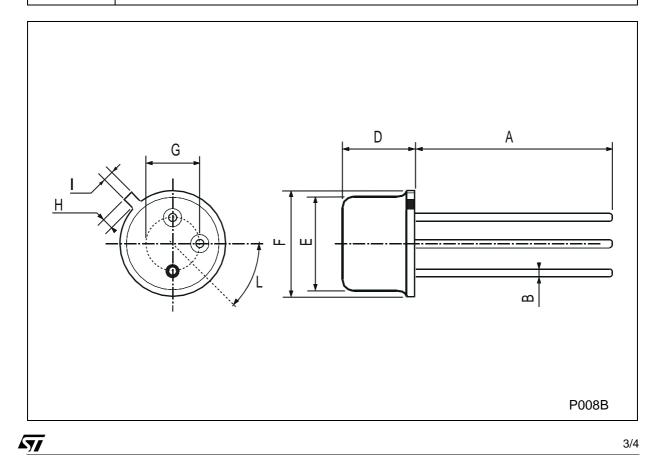
ELECTRICAL CHARACTERISTICS ($T_{case} = 25 \ ^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
Ісво	Collector Cut-off Current (I _E = 0)	for 2N5415 V _{CB} = -175 V for 2N5416 V _{CB} = -280 V			-50 -50	μΑ μΑ
I _{CEO}	Collector Cut-off Current ($I_B = 0$)	V _{CE} = -150 V			-50	μA
I _{EBO}	Emitter Cut-off Current $(I_C = 0)$	for 2N5415 V _{EB} = -4 V for 2N5416 V _{EB} = -6 V			-20 -20	μΑ μΑ
V_{CER*}	Collector-Emitter Sustaining Voltage	$I_{C} = -50 \text{ mA}$ $R_{BE} = 50\Omega$ for 2N5416	-350			V
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage	I _C = -10 mA for 2N5415 for 2N5416	-200 -300			V V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	I _C = -50 mA I _B = -5 mA			-2.5	V
V _{BE} *	Base-Emitter Voltage	I _C = -50 mA V _{CE} = -10 V			-1.5	V
h _{FE} *	DC Current Gain	I _C = -50 mA V _{CE} = -10 V for 2N5415 for 2N5416	30 30		150 120	
h _{fe}	Small Signal Current Gain	$I_{C} = -5 \text{ mA}$ $V_{CE} = -10 \text{ V}$ $f = 1 \text{ KHz}$	25			
f⊤	Transition frequency	$I_{C} = -10 \text{ mA}$ $V_{CE} = -10 \text{ V}$ f = 5MHz	15			MHz
Ссво	Collector Base Capacitance	$I_{E} = 0 \qquad V_{CB} = -10 \ V \qquad f = 1 MHz$			25	pF

 \ast Pulsed: Pulse duration = 300 $\mu s,$ duty cycle 1.5 %

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





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4/4