

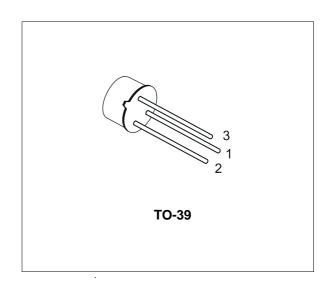
SILICON PNP TRANSISTORS

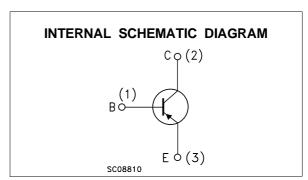
- STMicroelectronics PREFERRED SALESTYPES
- PNP TRANSISTORS

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	Unit	
		2N5415	2N5416	
V _{CBO}	Collector-Base Voltage (I _E = 0)	-200	-350	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	-200	-300	V
V_{EBO}	Emitter-Base Voltage (I _C = 0)	-4	-6	V
I _C	Collector Current	-1		Α
I _B	Base Current	-0.5		А
P _{tot}	Total Dissipation at T _c ≤ 25 °C	10		W
P _{tot}	Total Dissipation at T _{amb} ≤ 50 °C	1		W
T _{stg}	Storage Temperature	-65 to 200		°C

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THERMAL DATA

R _{thj-cas}	Thermal Resistance Junction-case	Max	17.5	°C/W	l
R _{thj-am}	b Thermal Resistance Junction-ambient	Max	175	°C/W	l

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

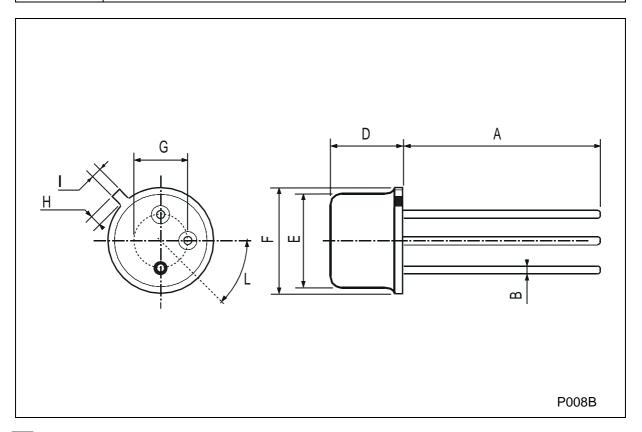
Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
Ісво	Collector Cut-off Current (I _E = 0)	for 2N5415 V _{CB} = -175 V for 2N5416 V _{CB} = -280 V			-50 -50	μA μA
I _{CEO}	Collector Cut-off Current (I _B = 0)	V _{CE} = -150 V			-50	μΑ
I _{EBO}	Emitter Cut-off Current (I _C = 0)	for 2N5415 V _{EB} = -4 V for 2N5416 V _{EB} = -6 V			-20 -20	μA μA
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	$I_C = -50 \text{ mA}$ $I_B = -5 \text{ mA}$			-2.5	V
$V_{BE}*$	Base-Emitter Voltage	$I_{C} = -50 \text{ mA}$ $V_{CE} = -10 \text{ V}$			-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	$I_{C} = -10 \text{ mA}$ $V_{CE} = -10 \text{ V}$ $f = 5 \text{MHz}$	15			MHz
Ссво	Collector Base Capacitance	I _E = 0 V _{CB} = -10 V f = 1MHz			25	pF

^{*} Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

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TO-39 MECHANICAL DATA

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



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