

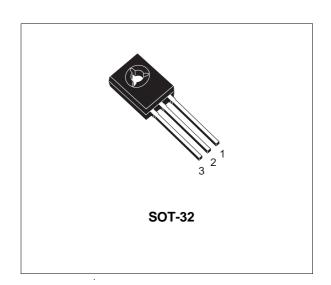
PNP SILICON TRANSISTORS

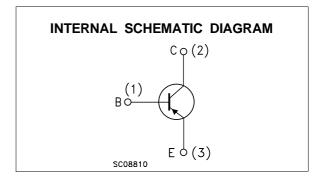
Туре	Marking
BD136	BD136
BD136-10	BD136-10
BD136-16	BD136-16
BD138	BD138
BD140	BD140
BD140-10	BD140-10
BD140-16	BD140-16

- STMicroelectronics PREFERRED SALESTYPES
- PNP TRANSISTOR

DESCRIPTION

The BD136, BD138 and BD140 are silicon Epitaxial Planar PNP transistors mounted in Jedec SOT-32 plastic package, designed for audio amplifiers and drivers utilizing complementary or quasi-complementary circuits. The complementary NPN types are the BD135 BD137 and BD139.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value		
-		BD136	BD138	BD140	
V _{CBO}	Collector-Base Voltage (I _E = 0)	-45	-60	-80	V
Vceo	Collector-Emitter Voltage (I _B = 0)	-45	-45 -60		V
V _{EBO}	Emitter-Base Voltage (I _C = 0)	-5			V
Ic	Collector Current	-1.5			Α
I _{CM}	Collector Peak Current	-3		Α	
lΒ	Base Current	-0.5			Α
P _{tot}	Total Dissipation at T _c ≤ 25 °C	12.5			W
P _{tot}	Total Dissipation at T _{amb} ≤ 25 °C	1.25		W	
T _{stg}	Storage Temperature		-65 to 150		
Ti	Max. Operating Junction Temperature	150			°C

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THERMAL DATA

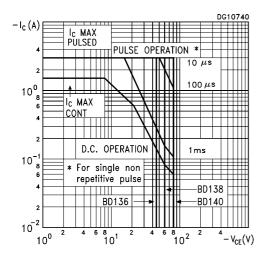
R _{thj-case} Thermal Resistance Junction-ca	se Max	10	°C/W	
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ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Тур.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = -30 V V _{CB} = -30 V T _C = 125 °C			-0.1 -10	μA μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -5 V			-10	μΑ
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = -30 mA for BD136 for BD138 for BD140	-45 -60 -80			V V V
$V_{CE(sat)^*}$	Collector-Emitter Saturation Voltage	I _C = -0.5 A I _B = -0.05 A			-0.5	V
V _{BE} *	Base-Emitter Voltage	$I_{C} = -0.5 \text{ A}$ $V_{CE} = -2 \text{ V}$			-1	V
h _{FE} *	DC Current Gain	I _C = -5 mA	25 40 25		250	
h _{FE}	h _{FE} Groups	I_C = -150 mA V_{CE} = -2 V for BD136/BD140 group-10 for BD136/BD140 group-16	63 100		160 250	

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

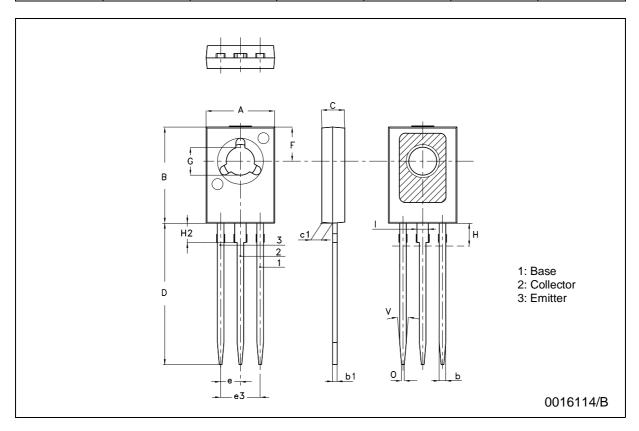
Safe Operating Areas



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SOT-32 (TO-126) MECHANICAL DATA

DIM.	mm inch			inch	<u></u> า	
DIIVI.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
Α	7.4		7.8	0.291		0.307
В	10.5		10.8	0.413		0.425
b	0.7		0.9	0.028		0.035
b1	0.40		0.65	0.015		0.025
С	2.4		2.7	0.094		0.106
c1	1.0		1.3	0.039		0.051
D	15.4		16.0	0.606		0.630
е		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
Н			2.54			0.100
H2		2.15			0.084	
I		1.27			0.05	
0		0.3			0.011	
V		10°			10°	



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