

SEMICONDUCTOR TM

BD136/138/140

Medium Power Linear and Switching Applications

Complement to BD135, BD137 and BD139 respectively



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_{C}=25^{\circ}C$ unless otherwise noted

Symbol	Parar	neter	Value	Units
V _{CBO}	Collector-Base Voltage	: BD136	- 45	V
020	_	: BD138	- 60	V
		: BD140	- 80	V
V _{CEO}	Collector-Emitter Voltage	: BD136	- 45	V
	_	: BD138	- 60	V
		: BD140	- 80	V
V _{EBO}	Emitter-Base Voltage		- 5	V
I _C	Collector Current (DC)		- 1.5	Α
I _{CP}	Collector Current (Pulse)		- 3.0	Α
IB	Base Current		- 0.5	Α
P _C	Collector Dissipation (T _C =25°C)		12.5	W
P _C	Collector Dissipation (Ta=25°C)		1.25	W
TJ	Junction Temperature		150	°C
T _{STG}	Storage Temperature		- 55 ~ 150	°C

Electrical Characteristics $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
V _{CEO} (sus)	* Collector-Emitter Sustaining Voltage					
	: BD136	I _C = - 30mA, I _B = 0	- 45			V
	: BD138		- 60			V
	: BD140		- 80			V
I _{CBO}	Collector Cut-off Current	V _{CB} = - 30V, I _E = 0			- 0.1	μA
I _{EBO}	Emitter Cut-off Current	$V_{EB} = -5V, I_{C} = 0$			- 10	μA
h _{FE1}	* DC Current Gain	V _{CE} = - 2V, I _C = - 5mA	25			
h _{FE2}		$V_{CE} = -2V, I_{C} = -0.5A$	25			
h _{FE3}		$V_{CE}^{2} = -2V, I_{C}^{2} = -150 \text{mA}$	40		250	
V _{CE} (sat)	* Collector-Emitter Saturation Voltage	I _C = - 500mA, I _B = - 50mA			- 0.5	V
V _{BE} (on)	* Base-Emitter ON Voltage	V _{CE} = - 2V, I _C = - 0.5A			- 1	V

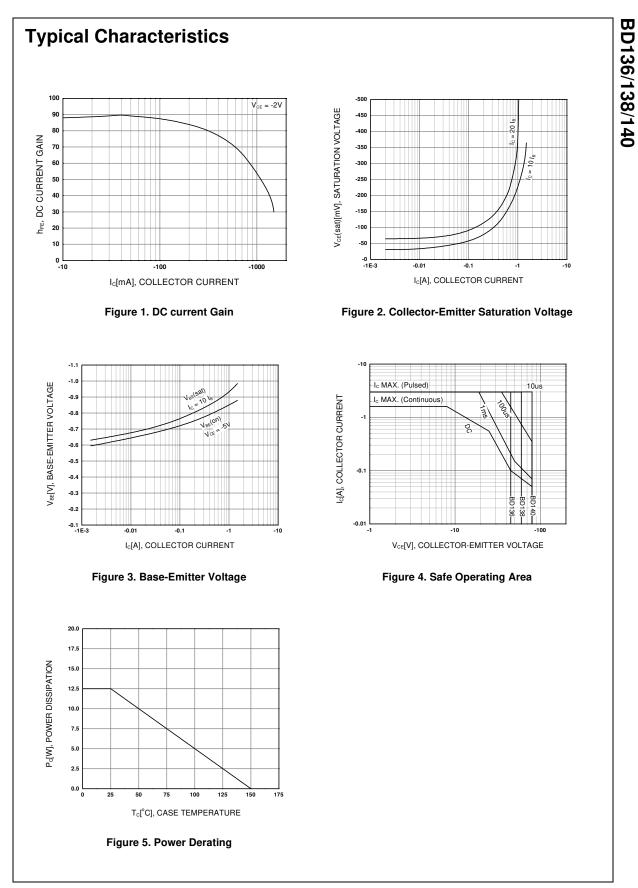
Pulse Test: PW=350µs, duty Cycle=2% Pulsed

h_{FE} Classificntion

Classification	6	10	16
h _{FE3}	40 ~ 100	63 ~ 160	100 ~ 250

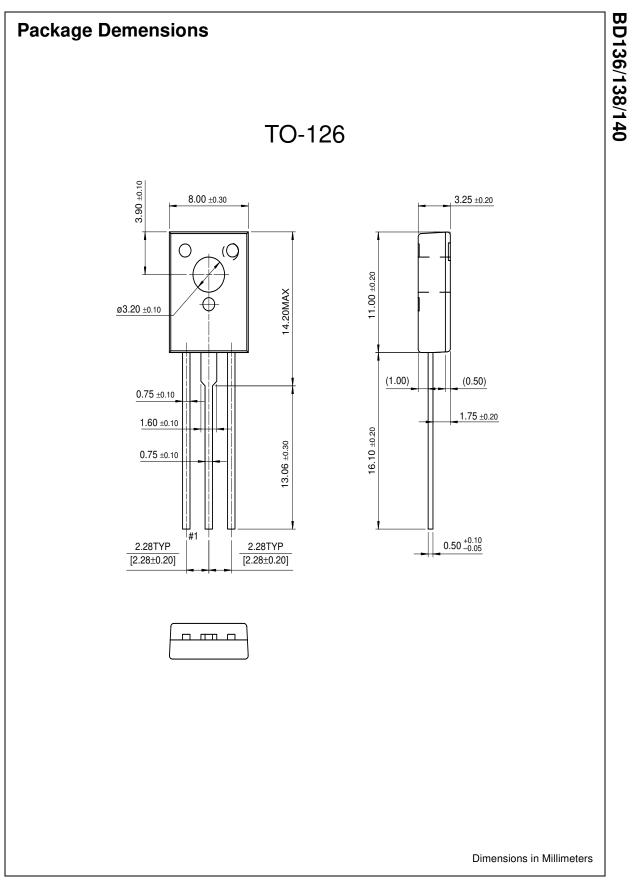
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BD136/138/140



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