



BD410

NPN EPITAXIAL SILICON POWER TRANSISTORS

They are silicon epitaxial planar NPN power transistors mounted in a TO-126 plastic package.
 AF-amplifier for high supply voltage
 They are intended for control circuit, vertical output stages in TVsets, and general purpose applications.
 Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	325	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
I_{CM}	Collector Peak Current	1.5	A
P_T	Total Power Dissipation	$T_a = 25^\circ\text{C}$	W
		$T_c = 25^\circ\text{C}$	
t_J	Junction Temperature	-55 to +125	°C
t_s	Storage Temperature range	-55 to +125	
t_L	Lead Temperature 1.6 mm From Case For 10 Seconds	260	

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ELECTRICAL CHARACTERISTICS

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

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
V_{CEO}	Collector-Emitter Breakdown Voltage (*)	$I_C= 10\text{ mA}, I_B= 0$	325	-	-	V
V_{CBO}	Collector-Base Breakdown Voltage	$I_C= 0.5\text{ mA}, I_E= 0$	500	-	-	V
V_{EBO}	Collector-Base Breakdown Voltage	$I_E= 50\ \mu\text{A}, I_C= 0$	5	-	-	V
I_{CES}	Collector Cutoff Current	$V_{CE} = 300\text{ V}, I_B= 0$	-	-	100	μA
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C= 100\text{ mA}, I_B= 10\text{ mA}$	-	-	0.5	V
V_{BE}	Base-Emitter Voltage (*)	$I_C= 100\text{ mA}, I_B= 10\text{ mA}$	-	-	1.5	V
h_{FE}	DC Current Gain (*)	$I_C= 5\text{ mA}, V_{CE}= 10\text{ V}$	25	-	-	-
		$I_C= 50\text{ mA}, V_{CE}= 10\text{ V}$	30	-	240	
		$I_C= 100\text{ mA}, V_{CE}= 10\text{ V}$	20	-	-	

SWITCHING TIMES.

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit
C_{obo}	Output Capacitance	$I_E= 0, V_{CB}= 10\text{ V}, f= 1\text{ MHz}$	-	5.5	-	μF
C_{ibo}	Input Capacitance	$I_E= 0, V_{CB}= 0.5\text{ V}, f= 1\text{ MHz}$	-	90	-	

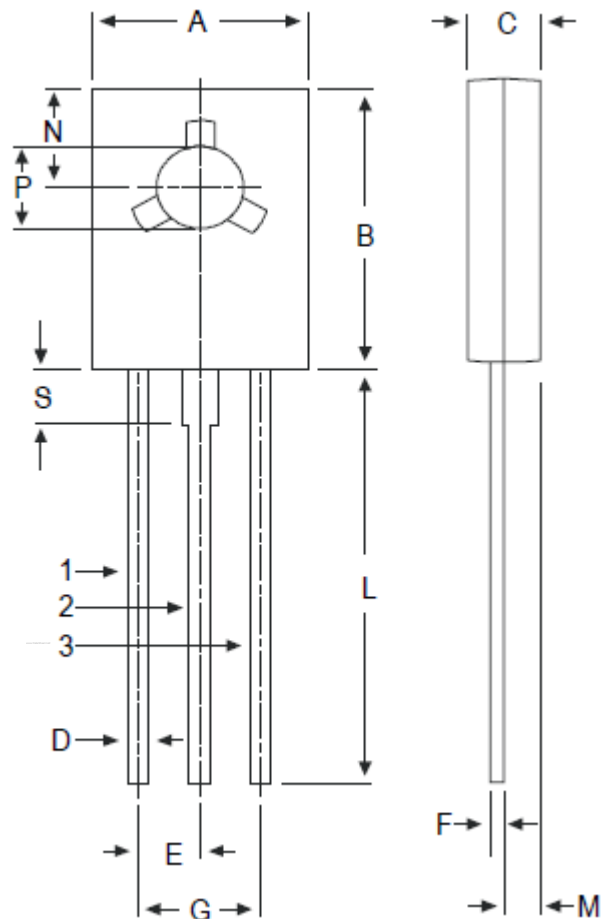
(*) These parameters must be measured using pulse techniques, t_p 300 μs , Duty Cycle $\leq 2\%$

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MECHANICAL DATA CASE TO-126

	DIMENSIONS	
	min	max
A	7.4	7.8
B	10.5	10.8
C	2.4	2.7
D	0.7	0.9
E	2.25 typ.	
F	0.49	0.75
G	4.4 typ.	
L	15.7 typ.	
M	1.27 typ.	
N	3.75 typ.	
P	3.0	3.2
S	2.54 typ.	

Pin 1 :	Emitter
Pin 2 :	Collector
Pin 3 :	Base



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