



## 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	

## BD410

### 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	$I_E= 50\text{ }\mu\text{A}, I_C= 0$	5	-	-	V
$I_{CES}$	Collector Cutoff Current	$V_{CE} = 300\text{ V}, I_B= 0$	-	-	100	$\mu\text{A}$
$V_{CE(SAT)}$	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	-	$\mu\text{F}$
$C_{ibo}$	Input Capacitance	$I_E= 0, V_{CB}= 0.5\text{ V}, f= 1\text{ MHz}$	-	90	-	

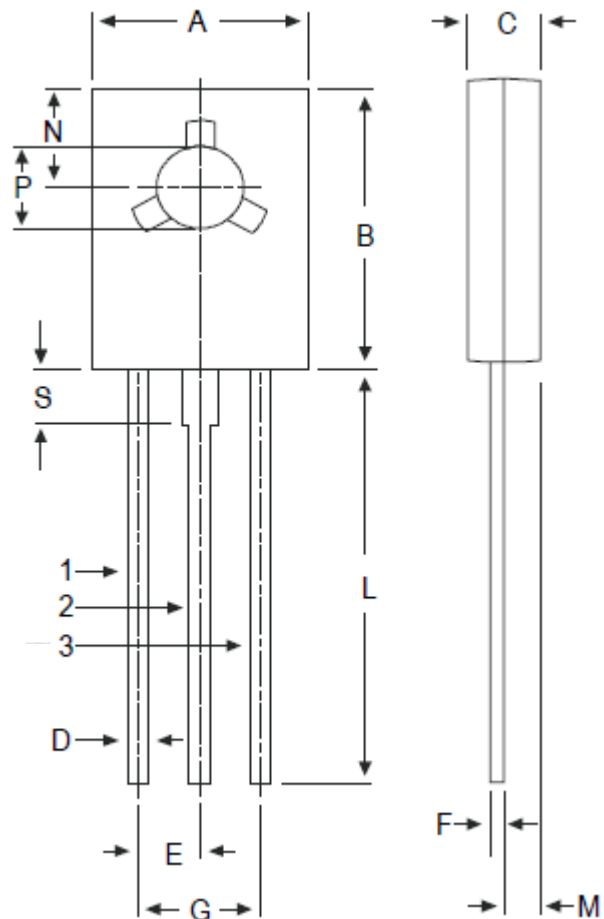
(\*) These parameters must be measured using pulse techniques,  $t_p$  300  $\mu\text{s}$ , Duty Cycle  $\leq 2\%$

# BD410

## 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



Revised August 2012

Information furnished is believed to be accurate and reliable. However, Comset Semiconductors assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. Data are subject to change without notice. Comset Semiconductors makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Comset Semiconductors assume any liability arising out of the application or use of any product and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Comset Semiconductors' products are not authorized for use as critical components in life support devices or systems.