

# Continental Device India Limited

An IS/ISO 9002 and IECQ Certified Manufacturer



### NPN EPITAXIAL SILICON POWER TRANSISTOR

**BD410** 



TO-126 Plastic Package

#### **ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	$V_{CBO}$	500	V
Collector -Emitter Voltage	$V_{CEO}$	325	V
Emitter Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	I <sub>C</sub>	1.0	Α
Peak Collector Current	$I_{CM}$	1.5	
Total Power Dissipation @ Ta=25 °C	P <sub>tot</sub>	1.25	W
@ Tc=25 °C		20	
Storage Temperature Range	$T_{j}, T_{stg}$	- 55 to +125	°C
Lead Temperature 1.6mm from Case for	T <sub>L</sub>	260	°C
10 Seconds.			

### ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	I <sub>CES</sub>	V <sub>CE</sub> =300V, <sub>IB</sub> =0			100	μΑ
Collector -Base Voltage	$V_{CBO}$	$I_{C}$ =500 $\mu$ A, $I_{E}$ =0	500			V
Collector Emitter Voltage	V <sub>CEO</sub> *	$I_C$ =10mA, $I_B$ =0	325			V
Emitter Base Voltage	$V_{EBO}$	$I_{E}$ =50 $\mu$ A, $I_{C}$ =0	5			V
DC Current Gain	h <sub>FE</sub>	$I_C$ =5mA, $V_{CE}$ =10V	25			
		$I_C$ =50mA, $V_{CE}$ =10V	30		240	
		$I_C$ =100mA, $V_{CE}$ =10V	20			
Base Emitter Saturation Voltage	V <sub>BE (Sat)</sub>	$I_C$ =100mA, $I_B$ =10mA			1.5	V
Collector Emitter Saturation Voltage	V <sub>CE (Sat)</sub>	$I_C$ =100mA, $I_B$ =10mA			0.5	V

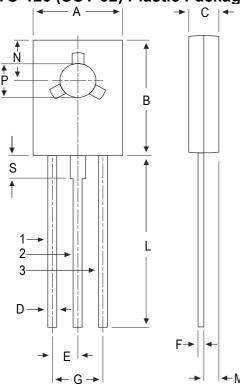
### **Dynamic Characteristics**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Output Capacitance	$C_{obo}$	$I_E=0, V_{CB}=10V, f=1MHz$		5.5		pF
Input Capacitance	$C_{ibo}$	I <sub>E</sub> =0, V <sub>EB</sub> =0.5V, f=1MHz		90		pF

<sup>\*</sup>Pulsed Test tp=300µs,Duty Cycle≤2%

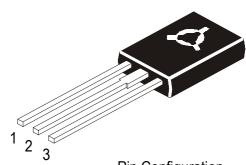
# TO-126 Plastic Package

## TO-126 (SOT-32) Plastic Package



MIN	MAX		
7.4	7.8		
10.5	10.8		
2.4	2.7		
0.7	0.9		
2.25 TYP.			
0.49	0.75		
4.5 TYP.			
15.7 TYP.			
1.27 TYP.			
3.75 TYP.			
3.0	3.2		
2.5 TYP.			
	7.4 10.5 2.4 0.7 2.25 0.49 4.5 1 15.7 1.27 3.75		

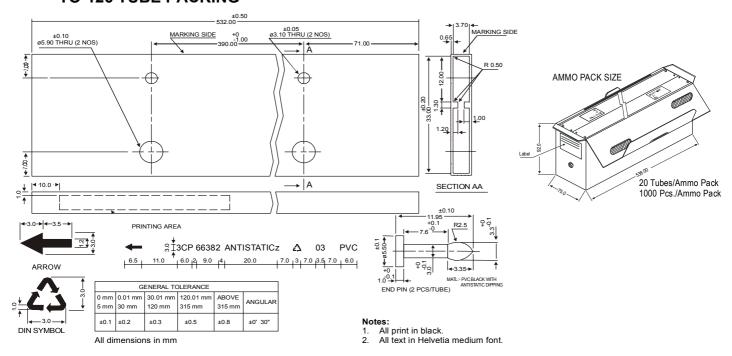
All dimensions in mm.



Pin Configuration

- 1. Emitter
- 2. Collector
- 3. Base

### **TO-126 TUBE PACKING**



# **Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
T0-126 Bulk	500 pcs/polybag	340 gm/500 pcs	3" x 7.5" x 7.5"	2K	17" x 15" x 13.5"	32K	31 kgs
TO-126 Tube	50 pcs/tube	73 gm/50 pcs	3" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	15 kgs

Notes BD410

TO-126 Plastic Package

### **Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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