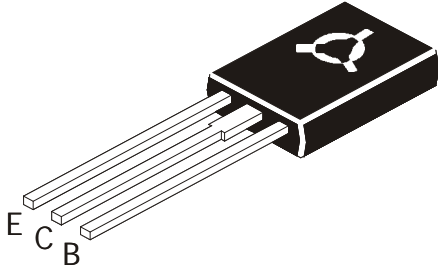


**NPN SILICON POWER TRANSISTOR**

**CD83**

**TO126**

**Plastic Package**



**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C )**

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Base Voltage	V <sub>CBO</sub>	60	V
Collector Emitter Voltage	V <sub>CEO</sub>	20	V
Emitter Base Voltage	V <sub>EBO</sub>	6.0	V
Collector Current	I <sub>C</sub>	5.0	A
Peak Collector Current	I <sub>CP</sub>	8.0	A
Collector Power Dissipation	P <sub>D</sub>	0.9	W
Operating and Storage Junction Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	- 55 to +150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =50V, I <sub>E</sub> =0			1.0	μA
Emitter Cut Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> = 0			1.0	μA
DC Current Gain	*h <sub>FE</sub>	I <sub>C</sub> =500mA, V <sub>CE</sub> =2V I <sub>C</sub> =3A, V <sub>CE</sub> =2V	100 75		560	
Collector Emitter Saturation Voltage	*V <sub>CE (sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =60mA			0.5	V
Base Emitter Saturation Voltage	*V <sub>BE (sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =60mA			1.5	V

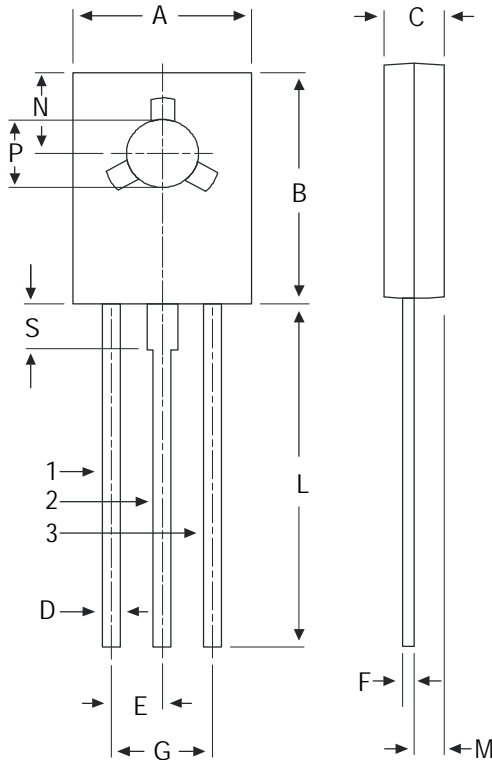
**DYNAMIC CHARACTERISTICS**

Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		120		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		45		pF

**Pulse Test: tp=300ms, Duty Cycle=2%**

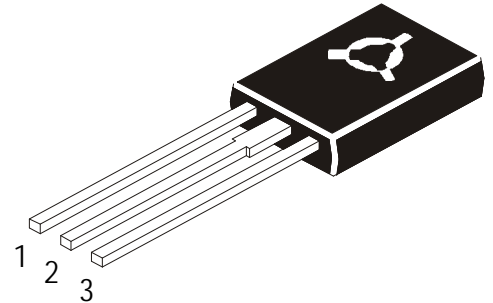
CD83Rev240205E

TO-126 (SOT-32) Plastic Package



DIM	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	4.5 TYP.	
L	15.7 TYP.	
M	1.27 TYP.	
N	3.75 TYP.	
P	3.0	3.2
S	2.5 TYP.	

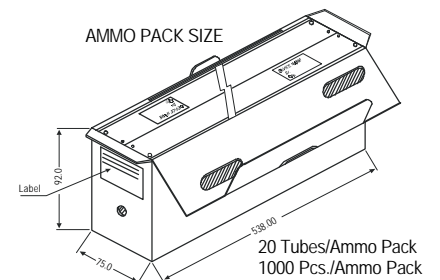
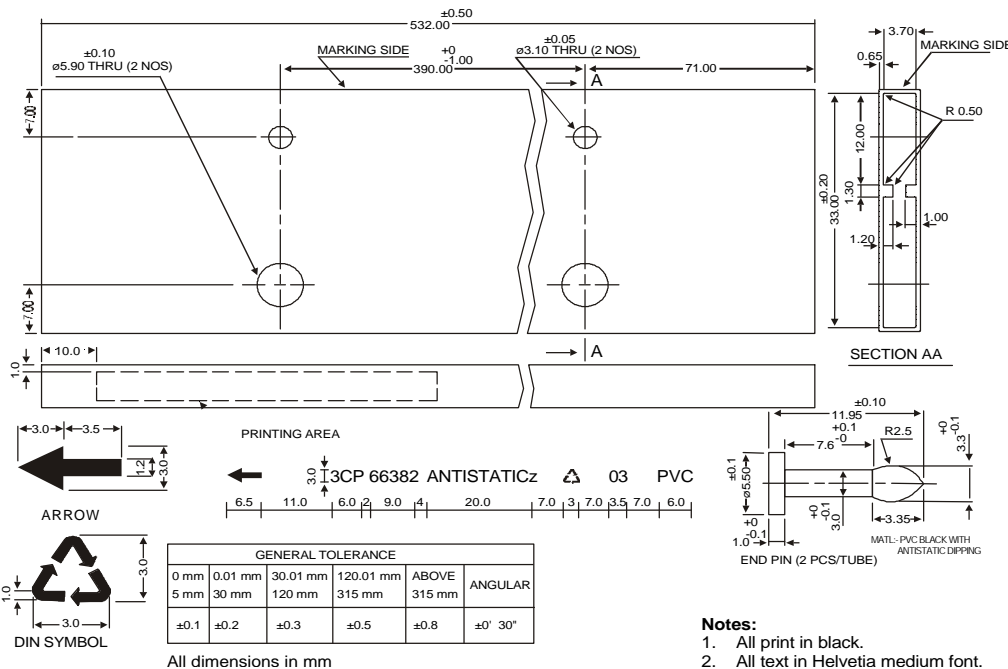
All dimensions in mm.



Pin Configuration

1. Emitter
2. Collector
3. Base

TO-126 TUBE PACKING



- Notes:
1. All print in black.
  2. All text in Helvetica medium font.

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-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

**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 are 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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