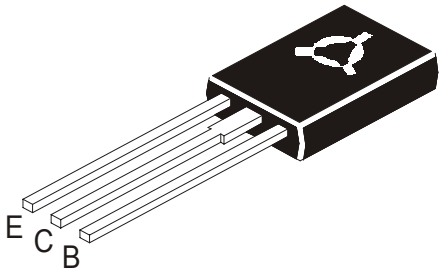
Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

NPN EPITAXIAL SILICON POWER TRANSISTOR

MJE243



TO-126
Plastic Package

Complementary MJE253

Designed for Low Power Audio Amplifier and Low-Current, High-Speed Switching Applications

ABSOLUTE MAXIMUM RATINGS

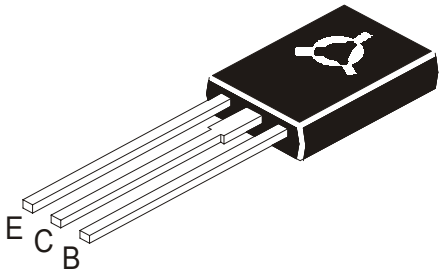
DESCRIPTION	SYMBOL	Value	UNIT
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EBO}	7.0	V
Continuous Collector Current Peak	I_C	4.0 8.0	A
Base Current	I_B	1.0	A
Total Power Dissipation @ T_c=25 ºC Derate Above 25ºC	P_D	15 0.12	W W/ºC
Total Power Dissipation @ T_a=25 ºC Derate Above 25ºC	P_D	1.5 0.012	W W/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150	ºC

Thermal Characteristics

Junction to Case	R_{th}(j-c)	8.34	ºC/W
Junction to Ambient	R_{th}(j-a)	83.4	ºC/W

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter Sustaning Voltage	$V_{CEO\ (Sus)}$	I_C=10mA, I_B=0	100			V
Collector Cut off Current	I_{CBO}	V_{CB}=100V, I_E=0 T_C=125ºC V_{CB}=100V, I_E=0			0.1 0.1	µA mA
Emitter Cut off Current	I_{EBO}	V_{BE}=7V, I_C=0			0.1	µA
DC Current Gain	h_{FE}	I_C=200mA, V_{CE}=1V I_C=1A, V_{CE}=1V	40 15		180	
Collector Emitter Saturation Voltage	$V_{CE\ (Sat)}$	I_C=500mA, I_B=50mA I_C=1A, I_B=100mA			0.3 0.6	V
Base Emitter Saturation Voltage	$V_{BE\ (Sat)}$	I_C=2A, I_B=200mA			1.8	V
Base Emitter on Voltage	$V_{BE\ (on)}$	I_C=500mA, V_{CE}=1V			1.5	V



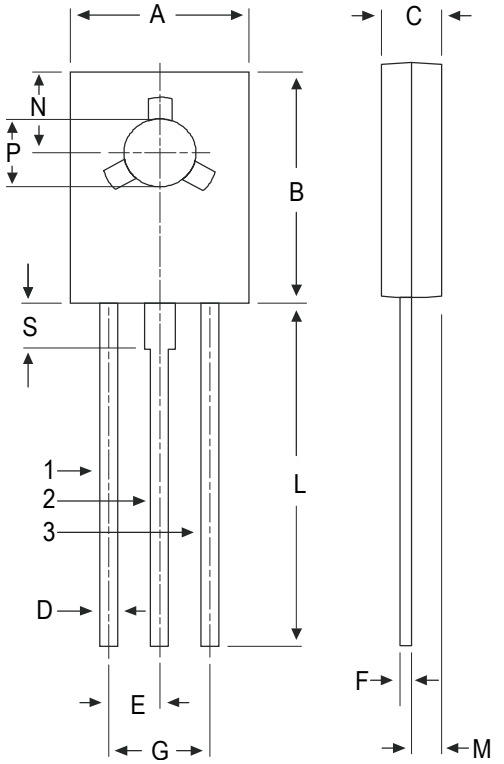
TO-126
Plastic Package

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise)

Dynamic Characteristics

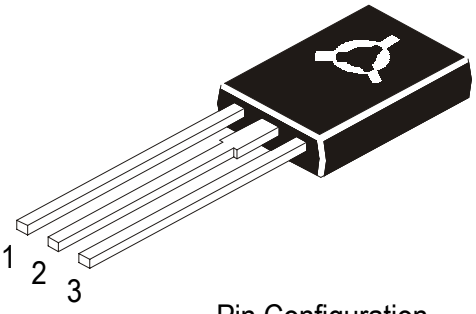
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Current Gain-Bandwidth Product	f_T	I_C=100mA, V_{CE}=10V, f=10MHz	40			MHz
Output Capacitance	C_{ob}	I_E=0,V_{CB}=10V, f=0.1MHz			50	pF

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.	

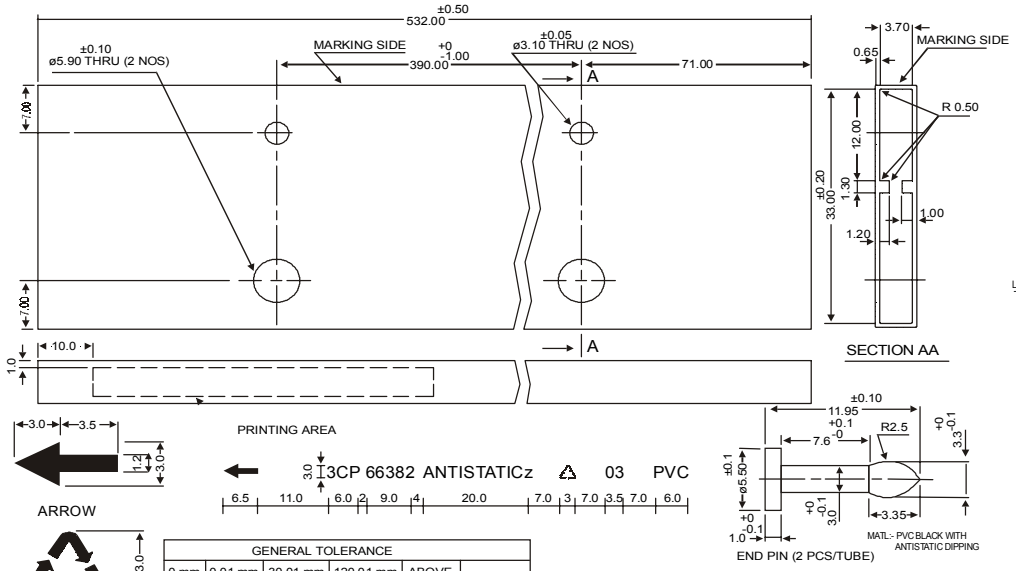
All dimensions in mm.



Pin Configuration

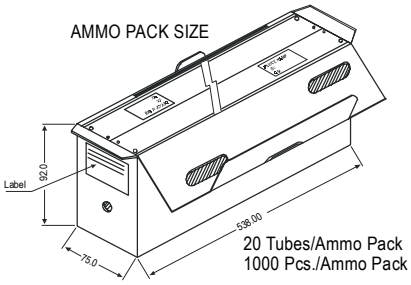
1. Emitter
2. Collector
3. Base

TO-126 TUBE PACKING



GENERAL TOLERANCE					
0 mm 5 mm	0.01 mm 30 mm	30.01 mm 120 mm	120.01 mm 315 mm	ABOVE 315 mm	ANGULAR
±0.1	±0.2	±0.3	±0.5	±0.8	±0° 30"

All dimensions in mm



Notes:
1. All print in black.
2. All text in Helvetia 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

TO-126
Plastic Package

Disclaimer

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