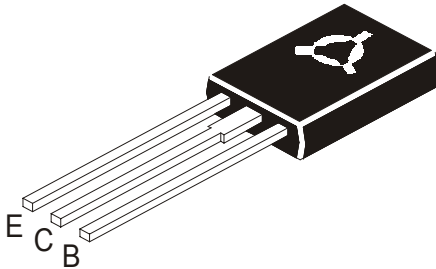


NPN EPITAXIAL SILICON POWER TRANSISTOR

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	I_C	4.0	A
Peak		8.0	
Base Current	I_B	1.0	A
Total Power Dissipation @ $T_c=25^\circ\text{C}$	P_D	15	W
Derate Above 25°C		0.12	W/ $^\circ\text{C}$
Total Power Dissipation @ $T_a=25^\circ\text{C}$	P_D	1.5	W
Derate Above 25°C		0.012	W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +150	$^\circ\text{C}$

Thermal Characteristics

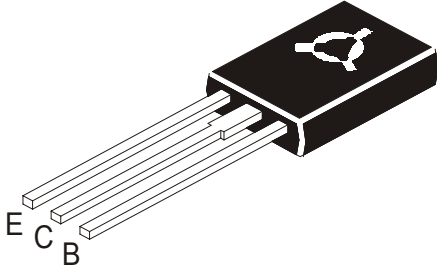
Junction to Case	$R_{th(j-c)}$	8.34	$^\circ\text{C/W}$
Junction to Ambient	$R_{th(j-a)}$	83.4	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

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

NPN EPITAXIAL SILICON POWER TRANSISTOR

MJE243



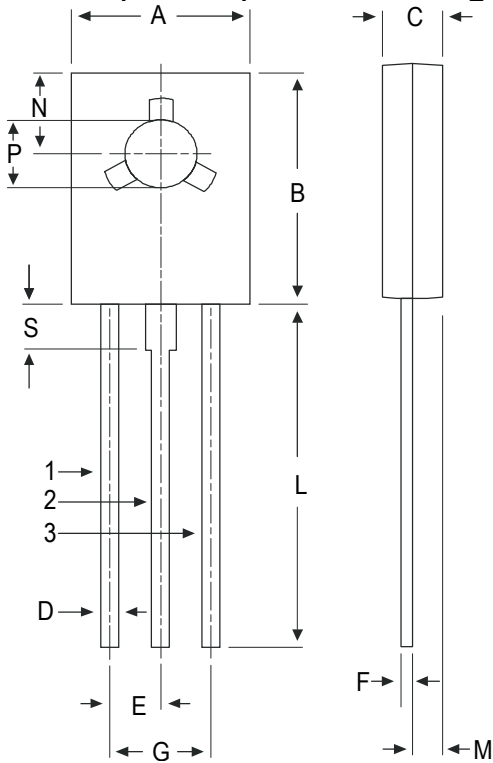
TO-126
Plastic Package

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless specified otherwise)

Dynamic Characteristics

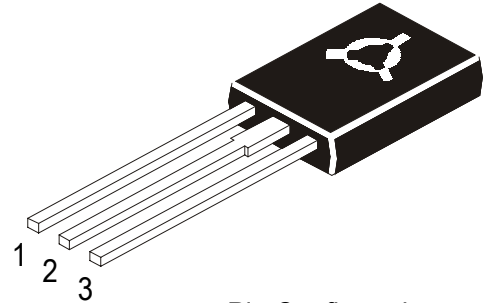
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Current Gain-Bandwidth Product	f_T	$I_C=100\text{mA}$, $V_{CE}=10\text{V}$, $f=10\text{MHz}$	40			MHz
Output Capacitance	C_{ob}	$I_E=0$, $V_{CB}=10\text{V}$, $f=0.1\text{MHz}$			50	pF

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.	

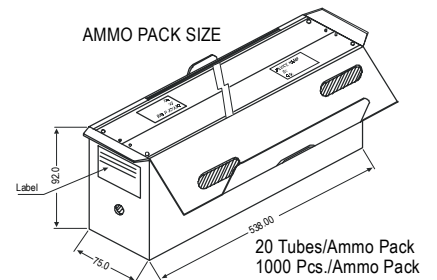
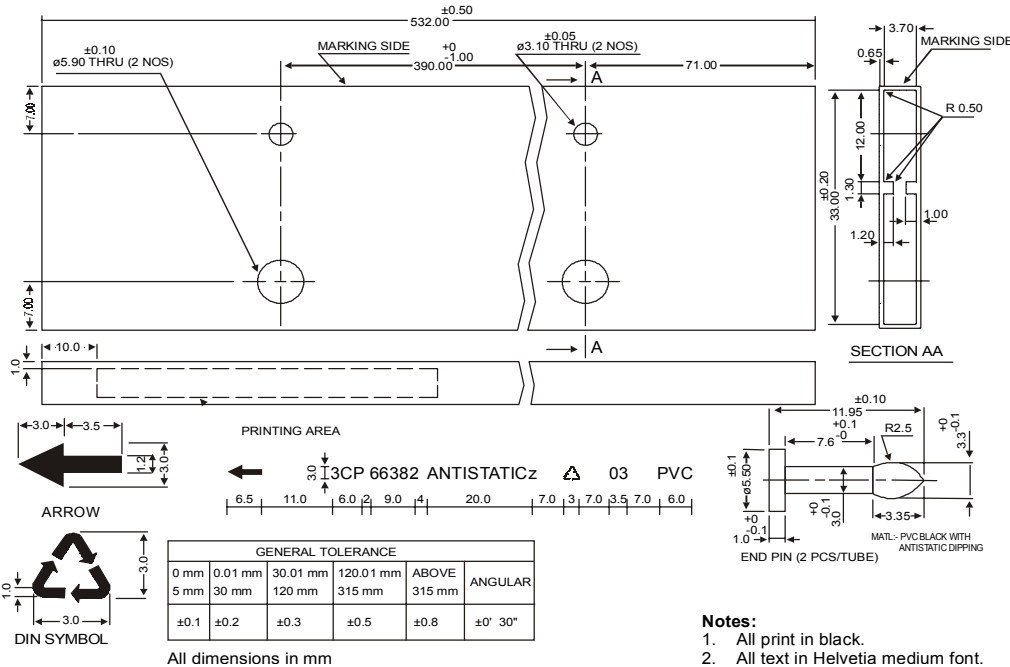
All dimensions in mm.



Pin Configuration

1. Emitter
2. Collector
3. Base

TO-126 TUBE PACKING



20 Tubes/Ammo Pack
1000 Pcs./Ammo Pack

- 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

Disclaimer

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