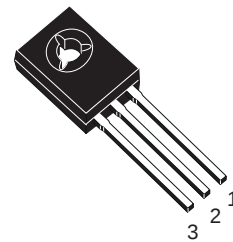


SILICON PNP TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- PNP TRANSISTOR

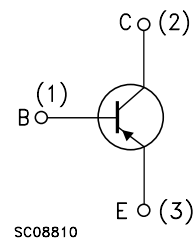
DESCRIPTION

The MJE210 is a silicon Epitaxial-Base PNP transistor in Jedec SOT-32 plastic package, designed for low voltage, low power, high gain audio amplifier applications.



SOT-32

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage ($I_E = 0$)	-40	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-25	V
V_{EBO}	Base-Emitter Voltage ($I_C = 0$)	-8	V
I_C	Collector Current	-5	A
I_{CM}	Collector Peak Current ($t_p < 5$ ms)	-10	A
I_B	Base Current	-1	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25$ °C at $T_{amb} \leq 25$ °C	15 1.5	W
T_{stg}	Storage Temperature	-65 to 150	°C
T_j	Max Operating Junction Temperature	150	°C

MJE210

THERMAL DATA

R _{thj-amb}	Thermal Resistance Junction-ambient	Max	83.4	°C/W
R _{thj-case}	Thermal Resistance Junction-case	Max	8.34	°C/W

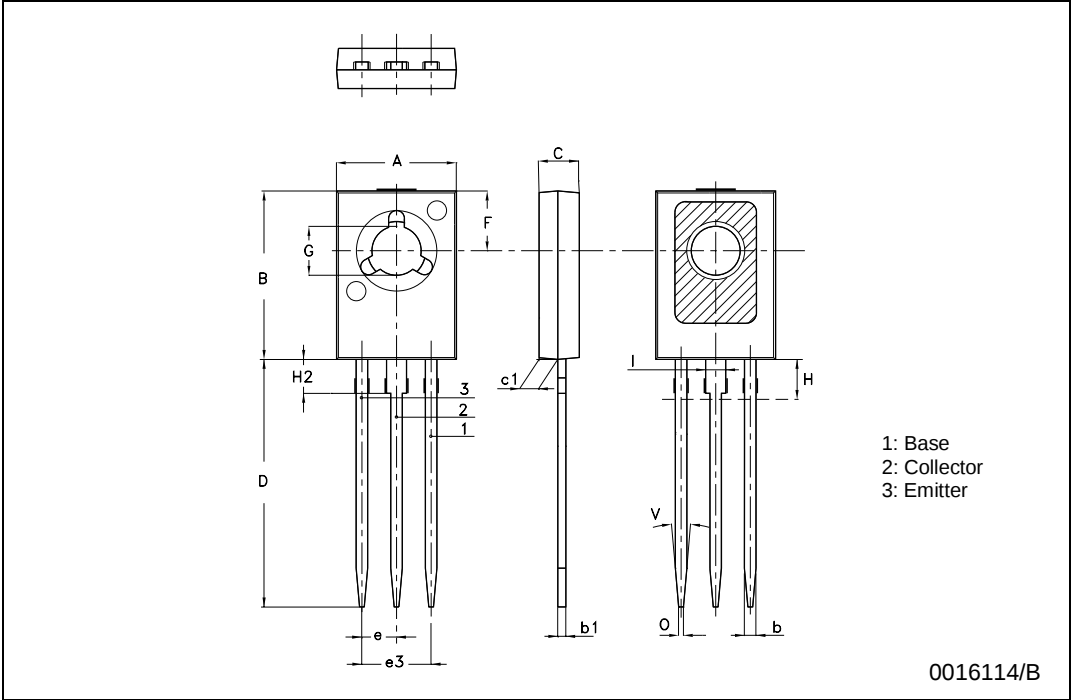
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = -40 V V _{CB} = -40 V T _{case} = 125°C			-100 -100	nA μA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = -8 V			-100	nA
V _{CEO(sus)} *	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = -10 mA	-25			V
V _{CE(sat)} *	Collector-Emitter Sustaining Voltage	I _C = -0.5 A I _B = -50 mA I _C = -2 A I _B = -0.2 A I _C = -5 A I _B = -1 A			-0.3 -0.75 -1.8	V V V
V _{BE(sat)} *	Base-Emitter on Voltage	I _C = -5 A I _B = -1 A			-2.5	V
V _{BE} *	Base-Emitter on Voltage	I _C = -2 A V _{CE} = -1 V			-1.6	V
h _{FE} *	DC Current Gain	I _C = -0.5 A V _{CE} = -1 V I _C = -2 A V _{CE} = -1 V I _C = -5 A V _{CE} = -2 V	70 45 10		180	
f _T	Transistor Frequency	I _C = 0.1 A V _{CE} = 10 V f = 10 MHz	65			MHz
C _{CBO}	Collector-base Capacitance	V _{CB} = -10 V I _E = 0 f = 0.1 MHz			120	pF

* Pulsed: Pulse duration = 300μs, duty cycle ≤ 1.5%

SOT-32 (TO-126) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		10.8	0.413		0.425
b	0.7		0.9	0.028		0.035
b1	0.40		0.65	0.015		0.025
C	2.4		2.7	0.094		0.106
c1	1.0		1.3	0.039		0.051
D	15.4		16.0	0.606		0.630
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100
H2		2.15			0.084	
I		1.27			0.05	
O		0.3			0.011	
V		10°			10°	



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