



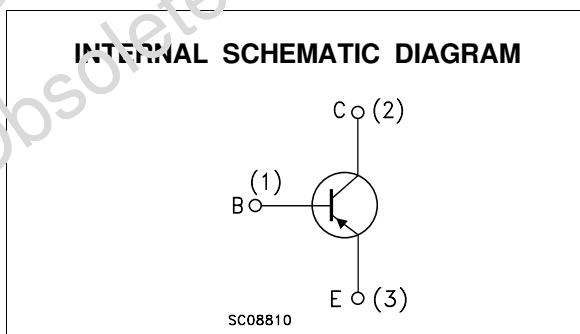
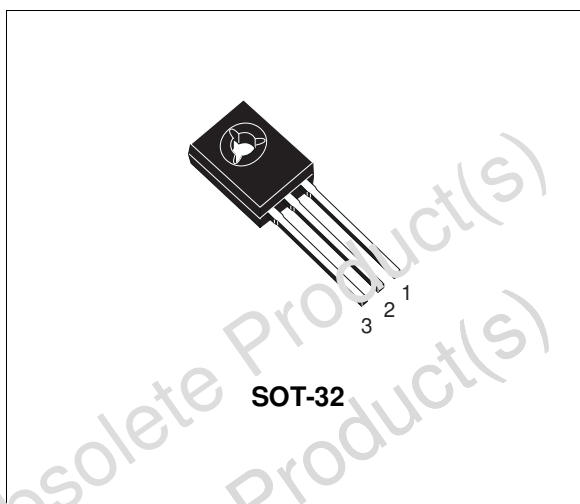
MJE210

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.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CB0}	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	$^{\circ}\text{C}/\text{W}$
$R_{thj-case}$	Thermal Resistance Junction-case	Max	8.34	$^{\circ}\text{C}/\text{W}$

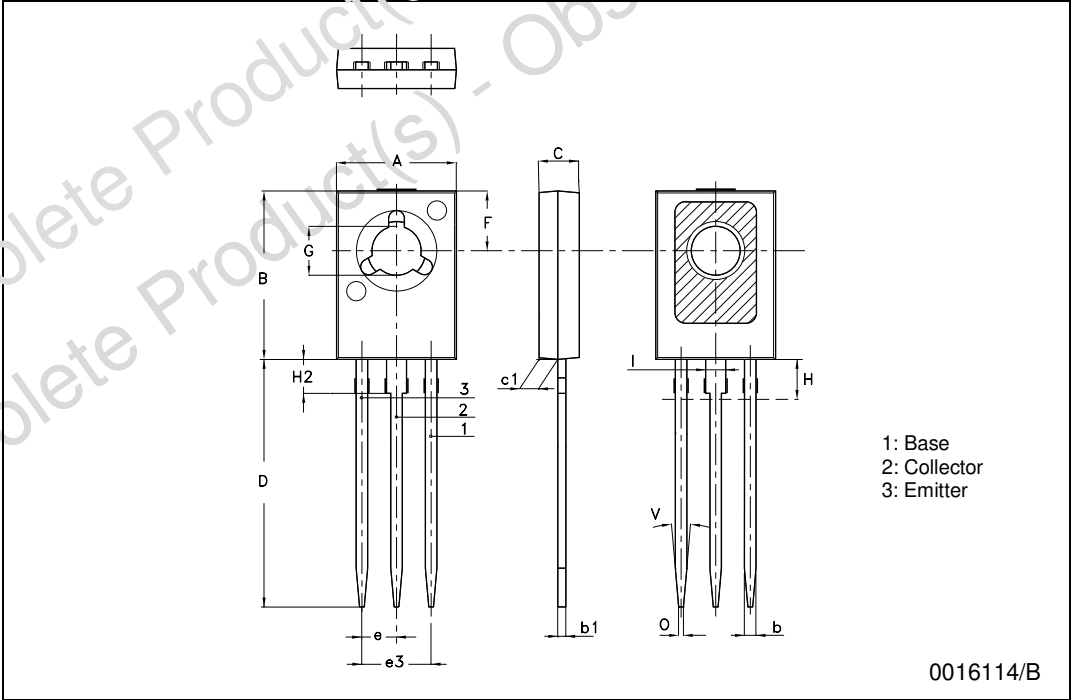
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = -40\text{ V}$ $V_{CB} = -40\text{ V}$ $T_{case} = 125^{\circ}\text{C}$			-100 -100	nA μA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = -8\text{ V}$			-100	nA
$V_{CEO(sus)}^*$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = -10\text{ mA}$	-25			V
$V_{CE(sat)}^*$	Collector-Emitter Sustaining Voltage	$I_C = -0.5\text{ A}$ $I_B = -50\text{ mA}$ $I_C = -2\text{ A}$ $I_B = -0.2\text{ A}$ $I_C = -5\text{ A}$ $I_B = -1\text{ A}$			0.3 -0.75 -1.8	V V V
$V_{BE(sat)}^*$	Base-Emitter on Voltage	$I_C = -5\text{ A}$ $I_B = -1\text{ A}$			-2.5	V
V_{BE}^*	Base-Emitter on Voltage	$I_C = -2\text{ A}$ $V_{CE} = -1\text{ V}$			-1.6	V
h_{FE}^*	DC Current Gain	$I_C = -0.5\text{ A}$ $V_{CE} = -1\text{ V}$ $I_C = -2\text{ A}$ $V_{CE} = -1\text{ V}$ $I_C = -5\text{ A}$ $V_{CE} = -2\text{ V}$	70 45 10		180	
f_T	Transistor Frequency	$I_C = 0.1\text{ A}$ $V_{CE} = 10\text{ V}$ $f = 10\text{ MHz}$	65			MHz
C_{CBO}	Collector-base Capacitance	$V_{CE} = -10\text{ V}$ $I_E = 0$ $f = 0.1\text{ MHz}$			120	pF

* Pulsed: Pulse duration = 300 μs , duty cycle $\leq 1.5\%$

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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