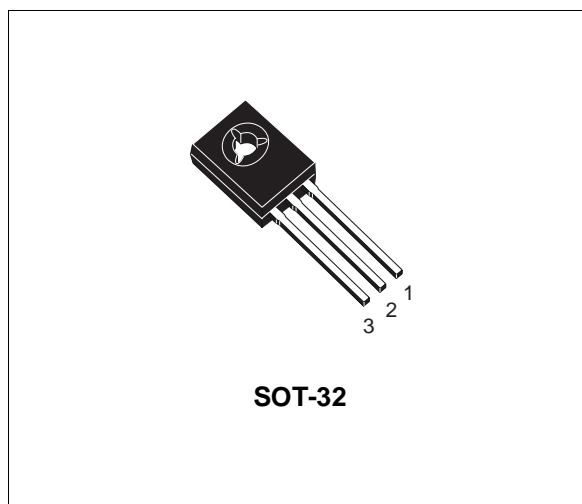


SILICON PNP TRANSISTOR

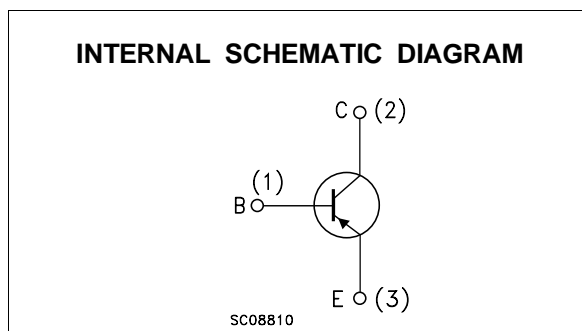
- SGS-THOMSON PREFERRED SALESTYPE
- PNP TRANSISTOR

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.



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	-10	A
I_B	Base Current	-1	A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$ at $T_{amb} \leq 25\text{ }^\circ\text{C}$	15 1.5	W
T_{stg}	Storage Temperature	-65 to 150	$^\circ\text{C}$
T_j	Max Operating Junction Temperature	150	$^\circ\text{C}$

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	$^{\circ}\text{C}/\text{W}$

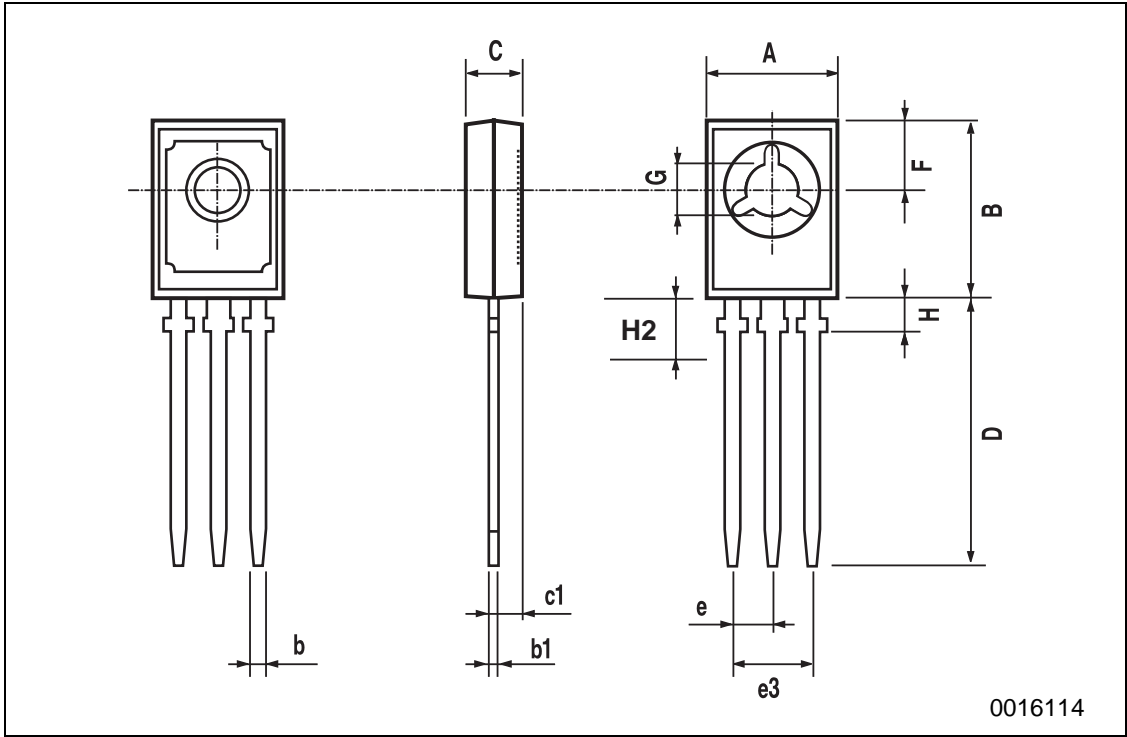
ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

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	$I_C = -10\text{ mA}$	-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	$V_{CB} = -10\text{ V}$ $I_E = 0$ $f = 0.1\text{ MHz}$			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		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.040		0.106
c1	1.0		1.3	0.039		0.050
D	15.4		16.0	0.606		0.629
e		2.2			0.087	
e3	4.15		4.65	0.163		0.183
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100
H2		2.15			0.084	



Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1997 SGS-THOMSON Microelectronics - Printed in Italy - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES
Australia - Brazil - Canada - China - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A
...