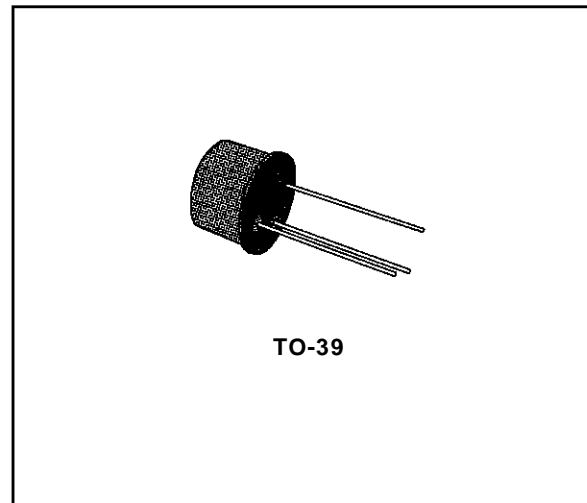


MEDIUM-POWER AMPLIFIERS

DESCRIPTION

The 2N5322 and 2N5323 are silicon planar epitaxial PNP transistors in Jedec TO-39 metal case. They are especially intended for high-voltage medium power applications in industrial and commercial equipments.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		2N5322	2N5323	
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 100	- 75	V
V_{CEV}	Collector-emitter Voltage ($V_{BE} = 1.5$ V)	- 100	- 75	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	- 75	- 50	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	- 6	- 5	V
I_C	Collector Current	- 2		A
I_B	Base Current	- 1		A
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25$ °C at $T_{case} \leq 25$ °C	1		W
		10		W
T_{stg}, T_j	Storage and Junction Temperature	- 65 to 200		°C

2N5322-2N5323

THERMAL DATA

$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	17.5	$^{\circ}C/W$
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	$^{\circ}C/W$

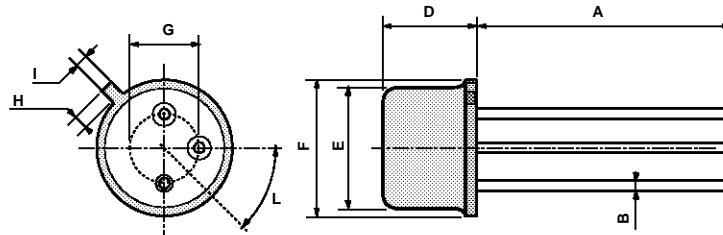
ELECTRICAL CHARACTERISTICS ($T_{case} = 25\ ^{\circ}C$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	For 2N5322 $V_{CB} = -80\ V$ For 2N5323 $V_{CB} = -60\ V$			- 0.5 - 5	μA μA
I_{EBO}	Emitter Cutoff Current ($I_C = 0$)	For 2N5322 $V_{EB} = -5\ V$ For 2N5323 $V_{EB} = -4\ V$		- 0.1 - 0.5		μA μA
$V_{(BR)CEV}$	Collector-emitter Breakdown Voltage ($V_{BE} = 1.5\ V$)	$I_C = -0.1\ mA$ For 2N5322 For 2N5323	- 100 - 75			V V
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = -10\ mA$ For 2N5322 For 2N5323	- 75 - 50			V V
$V_{(BR)EBO}$	Emitter-base Breakdown Voltage ($I_C = 0$)	$I_E = -0.1\ mA$ For 2N5322 For 2N5323	- 6 - 5			V V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -500\ mA$ $I_B = -50\ mA$ For 2N5322 For 2N5323			- 0.7 - 1.2	V V
V_{BE}^*	Base-emitter Voltage	$I_C = -500\ mA$ $V_{CE} = -4\ V$ For 2N5322 For 2N5323			- 1.1 - 1.4	V V
h_{FE}^*	DC Current Gain	For 2N5322 $I_C = -500\ mA$ $V_{CE} = -4\ V$ $I_C = -1\ A$ $V_{CE} = -2\ V$ For 2N5323 $I_C = -500\ mA$ $V_{CE} = -4\ V$	30 10 40		130 250	
f_T	Transition Frequency	$I_C = -50\ mA$ $V_{CE} = -4\ V$ $f = 10\ MHz$	50			MHz
t_{on}	Turn-on Time	$I_C = -500\ mA$ $V_{CC} = -30\ V$ $I_{B1} = -50\ mA$			100	ns
t_{off}	Turn-off Time	$I_C = -500\ mA$ $V_{CC} = -30\ V$ $I_{B1} = -I_{B2} = -50\ mA$			1000	ns

* Pulsed : pulse duration = 300 μs , duty cycle = 1 %.

TO39 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	12.7			0.500		
B			0.49			0.019
D			6.6			0.260
E			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
H			1.2			0.047
I			0.9			0.035
L	45° (typ.)					



P008B

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.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A