

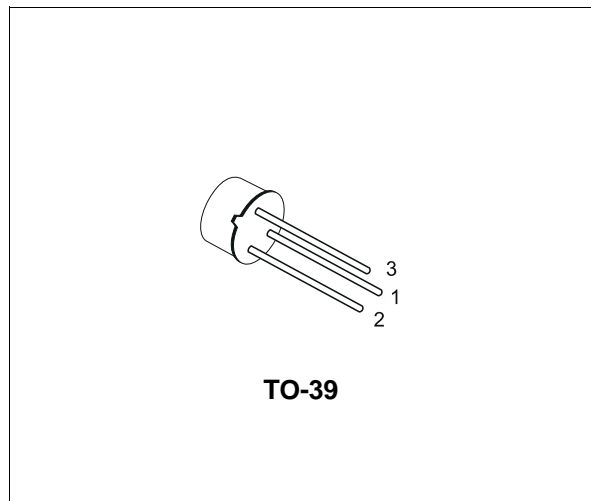
SMALL SIGNAL PNP TRANSISTORS

- SILICON EPITAXIAL PLANAR PNP TRANSISTORS
- MEDIUM POWER AMPLIFIER
- NPN COMPLEMENTS ARE 2N5320 AND 2N5321

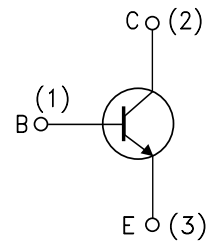
DESCRIPTION

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

The complementary NPN types are respectively the 2N5320 and 2N5321



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 ($V_{BE} = -1.5V$)	-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	-1.2		A
I_{CM}	Collector Peak Current	-2		A
I_B	Base Current	-1		A
P_{tot}	Total Dissipation at $T_{amb} = 25\text{ }^\circ\text{C}$	1		W
P_{tot}	Total Dissipation at $T_c = 25\text{ }^\circ\text{C}$	10		W
T_{stg}, T_j	Storage and Junction Temperature	-65 to 200		$^\circ\text{C}$

2N5322/2N5323

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-Case	Max	17.5	°C/W
R _{thj-amb}	Thermal Resistance Junction-Ambient	Max	175	°C/W

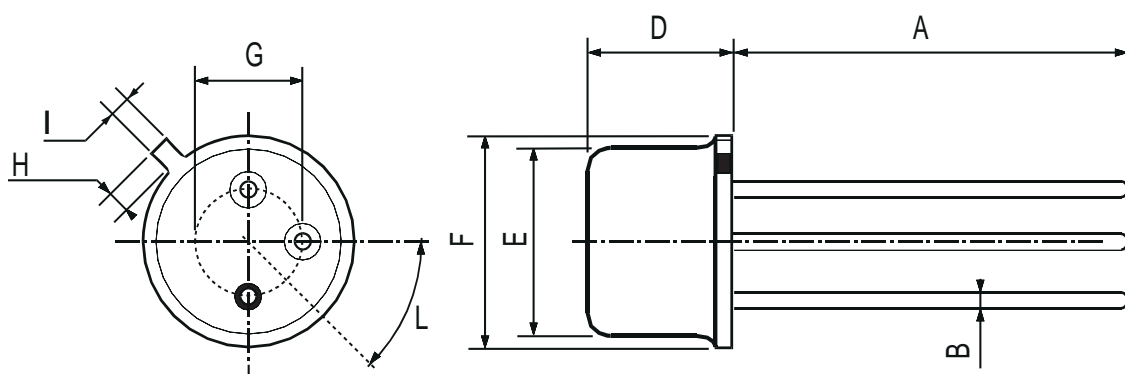
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = -80 V for 2N5322 V _{CB} = -60 V for 2N5323			-0.5 -5	μA μA
I _{EBO}	Collector Cut-off Current (I _C = 0)	V _{EB} = -5 V for 2N5322 V _{EB} = -4 V for 2N5323		-0.1 -0.5		μA μA
V _{(BR)CEV}	Collector-Emitter Breakdown Voltage (V _{BE} = 1.5V)	I _C = -100 μA 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 = -100 μA 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 %

TO-39 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.

© 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