SGS-THOMSON MICROELECTRONICS

2N5322
2N5323

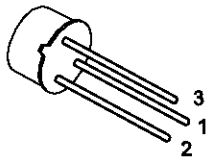
SMALL SIGNAL PNP TRANSISTORS

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

DESCRIPTION

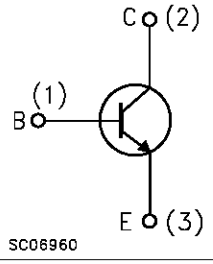
The 2N5322 and 2N5323 are silicon epitaxial planar PNP transistors in Jedec TO-39 metal case. They are especially intended for high-voltage medium power application in industrial and commercial equipments.

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



TO-39

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 °C	1		W
P_{tot}	Total Dissipation at T_c = 25 °C	10		W
T_{stg}, T_j	Storage and Junction Temperature	-65 to 200		°C

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-Case Max	17.5	°C/W
$R_{thj\text{-}amb}$	Thermal Resistance Junction-Ambient Max	175	°C/W

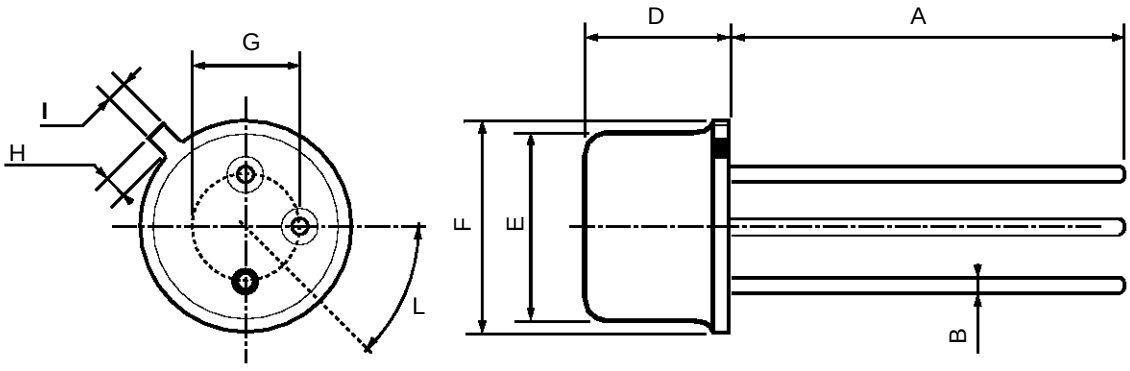
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

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^{o} (typ.)					



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