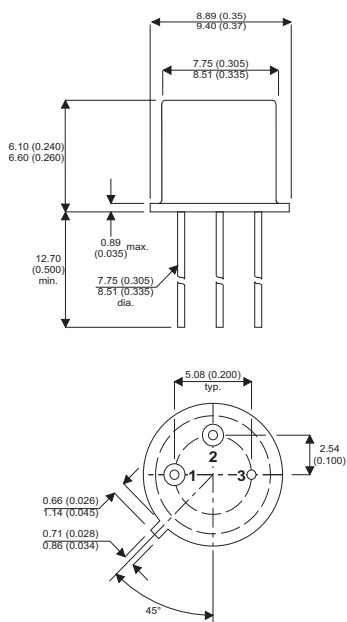


### MECHANICAL DATA

Dimensions in mm (inches)



**TO-39**

Pin 1 – Emitter      Pin 2 – Base      Pin 3 – Collector

## HIGH SPEED MEDIUM VOLTAGE SWITCHES

### DESCRIPTION

The 2N5322 and 2n5323 are silicon planar epitaxial PNP transistors in jedec TO-39 metal case intended for high voltage medium power applications in industrial and commercial equipment.

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

### ABSOLUTE MAXIMUM RATINGS

$T_{CASE} = 25^{\circ}C$  unless otherwise stated

		2N5322	2N5323
$V_{CBO}$	Collector – Base Voltage ( $I_E = 0$ )	-100V	-75V
$V_{CEV}$	Collector – Emitter Voltage ( $V_{BE} = 1.5v$ )	-100V	-75V
$V_{CEO}$	Emitter – Base Voltage ( $I_B = 0$ )	-75V	-50V
$V_{EBO}$	Emitter – Base Voltage ( $I_C = 0$ )	-6V	-5V
$I_C$	Continuous Collector Current		-2A
$I_B$	Base Current		-1A
$P_{tot}$	Total Dissipation at $T_{amb} = 25^{\circ}C$		1W
	$T_{case} = 50^{\circ}C$		10W
$T_{stg}, T_j$	Storage and Junction temperature		-65 to +200°C

### 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 FOR** ( $T_{case} = 25^{\circ}C$  unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$ Collector Cut Off Current	$V_{CB} = -80V$ $I_E = 0$ <b>2N5322</b>			-0.5	$\mu A$
	$V_{CB} = -60V$ $I_E = 0$ <b>2N5323</b>			-5	
$I_{EBO}$ Emitter Cut Off Current	$V_{EB} = -5V$ $I_C = 0$ <b>2N5322</b>			-0.1	$\mu A$
	$V_{EB} = -4V$ $I_C = 0$ <b>2N5323</b>			-0.5	
$V_{(BR)CEV}$ Collector Emitter Breakdown Voltage	$V_{BE} = 1.5V$ $I_C = -0.1mA$				V
	<b>2N5322</b>	-100			
$V_{CEO(SUS)^*}$ Collector Emitter Saturation Voltage	$I_C = -10mA$ $I_B = 0$				$\mu F$
	<b>2N5322</b>	-75			
$V_{(BR)EBO}$ Emitter Base Breakdown Voltage	$I_E = -0.1mA$ $I_C = 0$				V
	<b>2N5322</b>	-6			
$V_{CE(sat)^*}$ Collector Emitter Saturation Voltage	$I_C = -500mA$ $I_B = -50mA$				V
	<b>2N5322</b>			-0.7	
$V_{BE}^*$ Base Emitter Voltage	$I_C = -500mA$ $V_{CE} = -4V$				V
	<b>2N5322</b>			-1.1	
$h_{FE}^*$ DC Current Gain	$I_C = -500mA$ $V_{CE} = -4V$	30		130	—
	$I_C = -1A$ $V_{CE} = -2V$	10			
	<b>2N5322</b>				
$h_{FE}^*$ DC Current Gain	$I_C = -500mA$ $V_{CE} = -4V$	40		250	—
	<b>2N5323</b>				
$f_T$ Transistion Frequency	$I_C = -50mA$ $V_{CE} = -4V$	50			MHz
$t_{on}$ Turn-On Time	$I_C = -500mA$ $V_{CC} = -30V$ $I_{B1} = -50mA$			100	ns
$t_{off}$ Turn Off Time	$I_C = -500mA$ $V_{CC} = -30V$ $I_{B1} = -I_{B2} = -50mA$			1000	

\* Pulse test  $t_p = 300\mu s$ ,  $\delta = 1\%$