

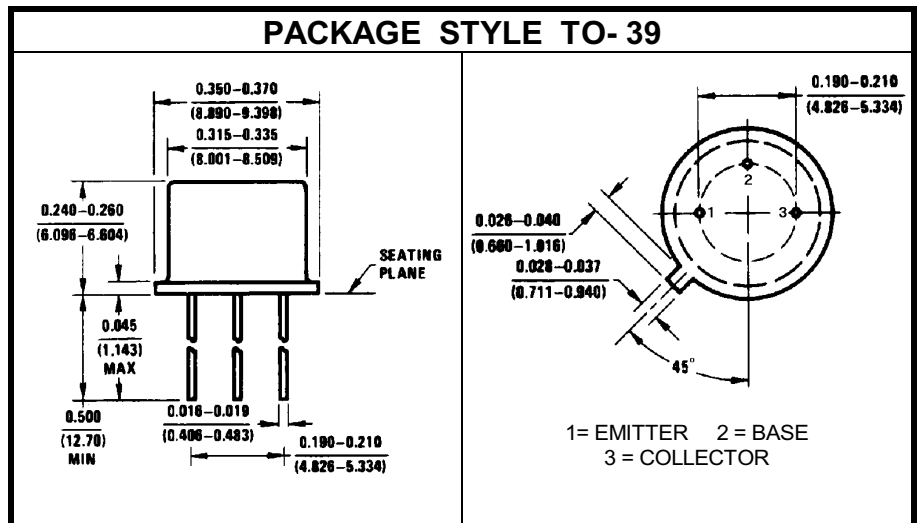
# SILICON PNP TRANSISTOR

**DESCRIPTION:**

The **2N2905A** is Designed for General Purpose Amplifier and Switching Applications

**MAXIMUM RATINGS**

$I_C$	600 mA
$V_{CE}$	-60 V
$P_{DISS}$	3.0 W @ $T_C = 25^\circ\text{C}$
$T_J$	-65 °C to +200 °C
$T_{STG}$	-65 °C to +200 °C
$\theta_{JC}$	58 °C/W


**CHARACTERISTICS**  $T_C = 25^\circ\text{C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 10\text{ mA}$	-60			V
$BV_{CBO}$	$I_C = 10\ \mu\text{A}$	-60			V
$I_{CBO}$	$V_{CB} = -50\text{ V}$ $T_C = 25^\circ\text{C}$ $T_C = 150^\circ\text{C}$			0.01 10	$\mu\text{A}$
$I_{CEX}$	$V_{CE} = -30\text{ V}$ $V_{BE} = 0.5\text{ V}$			50	nA
$I_B$	$V_{CE} = -30\text{ V}$ $V_{BE} = 0.5\text{ V}$			50	nA
$BV_{EBO}$	$I_E = 10\ \mu\text{A}$	-5.0			V
$h_{FE}$	$V_{CE} = -10\text{ V}$ $I_C = 100\ \mu\text{A}$ $I_C = 1.0\text{ mA}$ $I_C = 10\text{ mA}$ $I_C = 150\text{ mA}$ $I_C = 500\text{ mA}$	75 100 100 100 50	300		---
$V_{CE(SAT)}$	$I_C = 150\text{ mA}$ $I_B = 15\text{ mA}$ $I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$			-0.4 -1.6	V
$V_{BE(SAT)}$	$I_C = 150\text{ mA}$ $I_B = 15\text{ mA}$ $I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$			-1.3 -2.6	V

**DYNAMIC CHARACTERISTICS**  $T_c = 25^\circ\text{C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$f_t$	$V_{CE} = -20\text{ V}$ $I_C = 50\text{ mA}$ $f = 100\text{ MHz}$	200			<b>MHz</b>
$C_{ob}$	$V_{CB} = -10\text{ V}$ $f = 100\text{ KHz}$			8.0	<b>pF</b>
$C_{ib}$	$V_{EB} = -2.0\text{ V}$ $f = 100\text{ KHz}$			30	<b>pF</b>
$t_{on}$	$V_{CC} = -30\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = 15\text{ mA}$			45	<b>nS</b>
$t_d$	$V_{CC} = -30\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = 15\text{ mA}$			10	<b>nS</b>
$t_r$	$V_{CC} = -30\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = 15\text{ mA}$			40	<b>nS</b>
$t_{off}$	$V_{CC} = -6.0\text{ V}$ $I_C = 150\text{ mA}$ , $I_{B1} = I_{B2} = 15\text{ mA}$			100	<b>nS</b>
$t_s$	$V_{CC} = -6.0\text{ V}$ $I_C = 150\text{ mA}$ , $I_{B1} = I_{B2} = 15\text{ mA}$			80	<b>nS</b>
$t_f$	$V_{CC} = -6.0\text{ V}$ $I_C = 150\text{ mA}$ , $I_{B1} = I_{B2} = 15\text{ mA}$			30	<b>nS</b>