

MICRO ELECTRONICS

2N/PN2905

PNP
SILICON
TRANSISTORS

2N/PN2905 are PNP silicon planar epitaxial transistors. It is intended for driver stage of power amplifiers and switching applications.

2N2905
TO-39



PN2905
TO-92A



ABSOLUTE MAXIMUM RATINGS

		2N2905	PN2905
Collector-Base Voltage	VCBO	60V	60V
Collector-Emitter Voltage	VCEO	40V	40V
Emitter-Base Voltage	VEBO	5V	5V
Collector Current	IC	600mA	600mA
Total Power Dissipation @ Ta=25°C	Ptot	600mW	500mW
Operating Junction & Storage Temperature	Tj, Tstg	-65 to +200°C	-55 to +150°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV _{CB0}	-60		V	I _C = -10uA I _E = 0
Collector-Emitter Breakdown Voltage	LV _{CEO}	-40		V	I _C = -10mA I _B = 0
Emitter-Base Breakdown Voltage	BV _{EBO}	-5		V	I _E = -10uA I _C = 0
Collector Cutoff Current	I _{CB0}		-20	nA	V _{CB} = -50V I _E = 0
Collector Cutoff Current	I _{CB0}		-20	uA	V _{CB} = -50V I _E = 0
Collector Cutoff Current	I _{CEX}		-50	nA	T _A = 150°C V _{CE} = -30V V _{BE} = 0.5V
Base Current	I _B		50	nA	V _{CE} = -30V V _{BE} = 0.5V
D.C. Current Gain	h _{FE}	35			V _{CE} = -10V I _C = -100uA
D.C. Current Gain	h _{FE}	50			V _{CE} = -10V I _C = -1mA
D.C. Current Gain	h _{FE}	75			V _{CE} = -10V I _C = -10mA
D.C. Current Gain	h _{FE}	100	300		V _{CE} = -10V I _C = -150mA
D.C. Current Gain	h _{FE}	30			V _{CE} = -10V I _C = -500mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}		-0.4	V	I _C = -150mA I _B = -15mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}		-1.6	V	I _C = -500mA I _B = -50mA
Base-Emitter Saturation Voltage	V _{BE(sat)}		-1.3	V	I _C = -150mA I _B = -15mA
Base-Emitter Saturation Voltage	V _{BE(sat)}		-2.6	V	I _C = -500mA I _B = -50mA
Output Capacitance	C _{ob}		8	pF	V _{CB} = -10V I _E = 0
Input Capacitance	C _{ib}		30	pF	V _{EB} = -2V I _C = 0
High Frequency Current Gain	h _{fe}	2			V _{CE} = -20V I _C = -50mA f = 100MHz

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ELECTRICAL CHARACTERISTICS @ $T_A=25^{\circ}\text{C}$ (unless otherwise stated) :

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Delay Time	t_d		10	nsec	$I_C=-150\text{mA}$ $I_{B1}=-15\text{mA}$
Rise Time	t_r		40	nsec	$V_{BE(\text{off})}=0$ $R_L=200\text{ohm}$
Turn On Time	t_{on}		45	nsec	
Storage Time	t_s		80	nsec	$I_C=-150\text{mA}$ $I_{B1}=-13\text{mA}$
Fall Time	t_f		30	nsec	$I_{B2}=17\text{mA}$ $R_L=37\text{ohm}$
Turn Off Time	t_{off}		100	nsec	