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2N2905
TO-39

2N2905 are PNP silicon planar epitaxial transistors. It is intended for driver stage of power amplifiers and switching applications.

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

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

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS	
Collector-Base Breakdown Voltage	BV_{CBO}	-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_{CBO}		-20	nA	V_{CB}=-50V	I_E=0
Collector Cutoff Current	I_{CBO}		-20	uA	V_{CB}=-50V, T_A=150°C	I_E=0
Collector Cutoff Current	I_{CEX}		-50	nA	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	Cob		8	pF	V_{CB}=-10V	I_E=0
Input Capacitance	Cib		30	pF	V_{EB}=-2V	I_C=0
High Frequency Current Gain	h_{fe}	2			V_{CE}=-20V, f=100MHz	I_C=-50mA

ELECTRICAL CHARACTERISTICS @ $T_A=25^oC$ (unless otherwise stated) :

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