

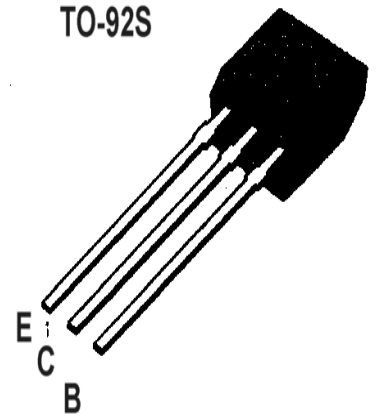
**PNP Transistors**

—NPN Silicon—

■■ **APPLICATION:** High Frequency Low Noise Amplifier Applications.

■■ **MAXIMUM RATINGS** (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V <sub>CBO</sub>	30	V
Collector-emitter voltage	V <sub>CEO</sub>	20	V
Emitter-base voltage	V <sub>EBO</sub>	4	V
Collector current	I <sub>C</sub>	25	mA
Collector Power Dissipation	P <sub>C</sub>	0.3	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~150	°C



■■ **ELECTRICAL CHARACTERISTICS** (Ta=25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION		
Collector-Base Breakdown Voltage	BV <sub>CBO</sub>	30			V	I <sub>C</sub> =0.1mA	I <sub>E</sub> =0	
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	20			V	I <sub>C</sub> =1mA	I <sub>B</sub> =0	
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	4			V	I <sub>E</sub> =0.1mA	I <sub>C</sub> =0	
Collector Cut-off Current	I <sub>CBO</sub>			0.1	uA	V <sub>CB</sub> =30V	I <sub>E</sub> =0	
Emitter Cut-off Current	I <sub>EBO</sub>			0.1	uA	V <sub>EB</sub> =3V	I <sub>C</sub> =0	
Base-Emitter Voltage	V <sub>BE</sub>		0.7		V	V <sub>CE</sub> =5V	I <sub>C</sub> =1mA	
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>			1	V	I <sub>C</sub> =10mA	I <sub>B</sub> =1mA	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>			0.3	V	I <sub>C</sub> =10mA	I <sub>B</sub> =1mA	
DC Current Gain	H <sub>FE</sub>	28		198	β	V <sub>CE</sub> =5V	I <sub>C</sub> =1mA	
Gain bandwidth product	f <sub>T</sub>	400			MHz	V <sub>CE</sub> =5V	I <sub>C</sub> =1mA	
Common Base Output Capacitance	Cob		1.2	1.6	pF	V <sub>CB</sub> =10V	I <sub>E</sub> =0	f=1MHz
Noise Figure	NF		3	5	dB	V <sub>CE</sub> =5V, I <sub>C</sub> =1mA, f=100MHz, R <sub>g</sub> =1KΩ		

■■ **H<sub>FE</sub> Classification And Marking**

Print Mark	9016					
Classification	D	E	F	G	H	I
HFE	28~45	39~60	54~80	72~108	97~146	132~198