

SPTECH Silicon NPN Transistor

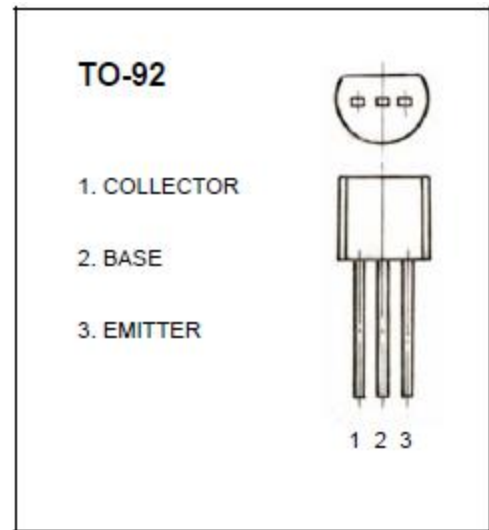
2SC945

DESCRIPTION

- High Voltage
- Excellent h_{FE} linearity

APPLICATIONS

- Designed for use in driver stage of AF amplifier and low speed switching



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	100	mA
I_B	Base Current-Continuous	20	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	250	mW
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^\circ\text{C}$

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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 100mA ; I _B = 10mA		0.15	0.3	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 100mA ; I _B = 10 mA		0.86	1.0	V
V _{BE}	Base -Emitter Voltage	I _C = 1.0mA ; V _{CE} = 6V	0.55		0.65	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 60V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			0.1	μ A
h _{FE1}	DC Current Gain	I _C = 0.1mA ; V _{CE} = 6V	50	185		
h _{FE2}	DC Current Gain	I _C = 1.0mA ; V _{CE} = 6V	90	200	600	
f _T	Current-Gain—Bandwidth Product	I _C = 10mA; V _{CE} = 6V;	150	250	450	MH z
Cob	Collector-Base Capacitance	V _{CB} =6V; I _E =0; f=1.0MHz		3	4	pF
NF	Noise Figure	I _C = 0.1mA ; V _{CE} = 6V,f=1kHz;R _G =2k Ω		0.8	15	dB

◆ **h_{FE2} Classifications**

R	O	P	K
90-180	135-270	200-400	300-600