

Silicon PNP Power Transistor

2SB942

DESCRIPTION

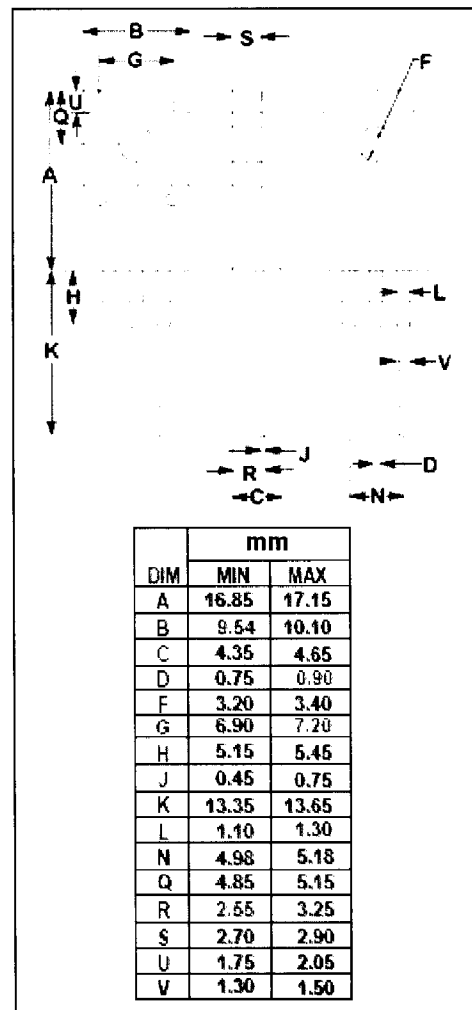
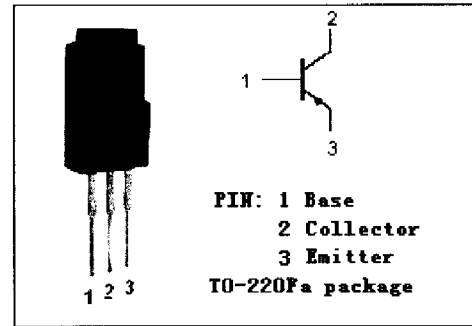
- Low Collector Saturation Voltage-
 $V_{CE(sat)} = -1.5V(\text{Max}) @ I_C = -4A$
- Good Linearity of h_{FE}
- Complement to Type 2SD1267

APPLICATIONS

- Designed for low-frequency power amplifications.

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	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-4	A
I_{CM}	Collector Current-Peak	-8	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -30\text{mA}; I_B = 0$	-60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -4\text{A}; I_B = -0.4\text{A}$			-1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -3\text{A}; V_{CE} = -4\text{V}$			-2.0	V
I_{CES}	Collector Cutoff Current	$V_{CE} = -60\text{V}; V_{BE} = 0$			-400	μA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -30\text{V}; I_B = 0$			-700	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-1	mA
h_{FE-1}	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -4\text{V}$	70		250	
h_{FE-2}	DC Current Gain	$I_C = -3\text{A}; V_{CE} = -4\text{V}$	15			
f_T	Current-Gain—Bandwidth Product	$I_C = -0.1\text{A}; V_{CE} = -10\text{V}; f_{test} = 10\text{MHz}$		30		MHz

Switching times

t_{on}	Turn-on Time	$I_C = -4\text{A}; I_{B1} = -I_{B2} = -0.4\text{A}$		0.2		μs
t_{stg}	Storage Time			0.5		μs
t_f	Fall Time			0.2		μs

◆ h_{FE-1} Classifications

Q	P
70-150	120-250