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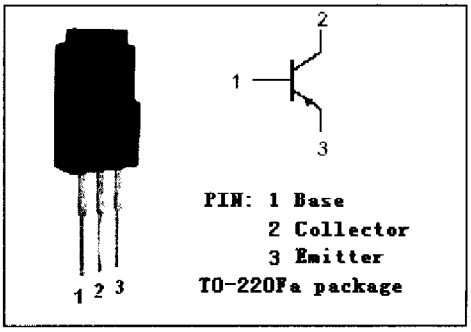
Silicon PNP Power Transistor — 2SB946

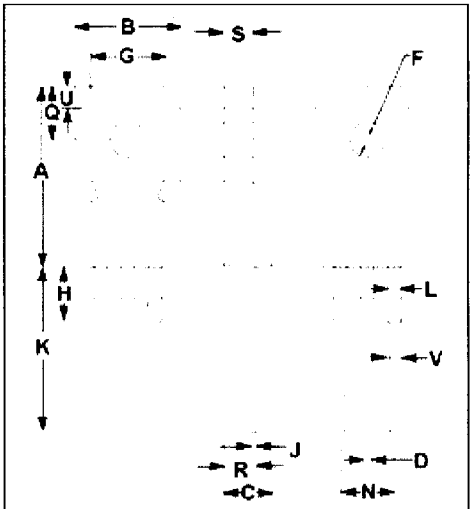


DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= -0.5V(Max)@I_C= -5A
- Good Linearity of h_{FE}
- Large Collector Current I_C
- Complement to Type 2SD1271

APPLICATIONS

- Designed for power switching applications



DIM	mm MIN	MAX
A	16.85	17.15
B	9.54	10.10
C	4.35	4.65
D	0.75	0.90
F	3.20	3.40
G	6.90	7.20
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.55	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-130	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-7	A
I_{CM}	Collector Current-Peak	-15	A
P_C	Collector Power Dissipation @ T_a=25℃	2	W
	Collector Power Dissipation @ T_C=25℃	40	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -10mA ; I_B= 0	-80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -5A; I_B= -0.25A			-0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -5A; I_B= -0.25A			-1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -100V ; I_E= 0			-10	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V ; I_C=0			-50	μ A
h_{FE-1}	DC Current Gain	I_C= -0.1A ; V_{CE}= -2V	45			
h_{FE-2}	DC Current Gain	I_C= -3A ; V_{CE}= -2V.	90		260	
f_T	Current-Gain—Bandwidth Product	I_C=-0.5A; V_{CE}= -10V;f_{test}=10MHz		30		MHz

Switching times

t_{on}	Turn-on Time	I_C= -3.0A ,I_{B1}= -I_{B2}= -0.3A,		0.5		μ s
t_{stg}	Storage Time			1.5		μ s
t_f	Fall Time			0.1		μ s

◆ h_{FE-2} Classifications

Q	P
90-180	130-260