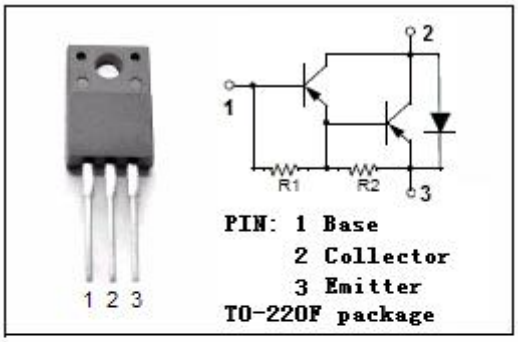
isc Silicon PNP Darlingtion Power Transistor 2SB975

DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 2000(Min)@ I_C= -3A
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = -1.5V(Max)@ I_C= -3A
- Complement to Type 2SD1309
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

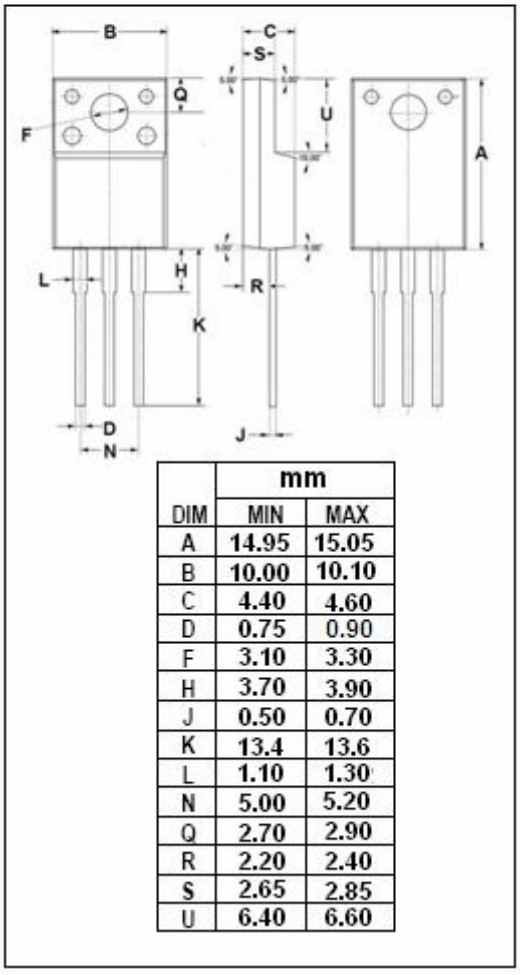


APPLICATIONS

- Designed for audio frequency power amplifier and low-speed switching industrial use.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-150	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-8	A
I_{CM}	Collector Current-Peak	-12	A
I_B	Base Current-DC	-0.8	A
P_C	Collector Power Dissipation T_C=25℃	40	W
	Collector Power Dissipation T_a=25℃	1.5	
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.85
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -3A, I_B= -3mA			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -3A, I_B= -3mA			-2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -100V, I_E= 0			-1.0	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -7V; I_C= 0			-5	mA
h_{FE-1}	DC Current Gain	I_C= -3A; V_{CE}= -2V	2000		15000	
h_{FE-2}	DC Current Gain	I_C= -5A; V_{CE}= -2V	500			
Switching times						
t_{on}	Turn-on Time	R_L= 16.7Ω, $V_{CC}\approx$ -50V I_C= -3A; I_{B1}= -I_{B2}= -3mA		1.0		μs
t_{stg}	Storage Time			3.5		μs
t_f	Fall Time			1.2		μs

◆ **h_{FE-1} Classifications**

M	L	K
2000-5000	3000-7000	5000-15000

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