

isc Silicon PNP Darlington Power Transistor

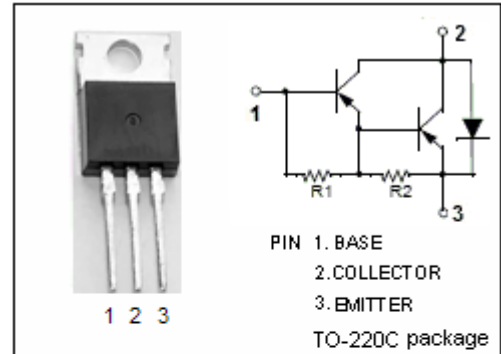
2SB974

DESCRIPTION

- High DC Current Gain-
: $h_{FE} = 2000(\text{Min}) @ I_C = -2\text{A}$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -1.5\text{V}(\text{Max}) @ I_C = -2\text{A}$
- Complement to Type 2SD1308

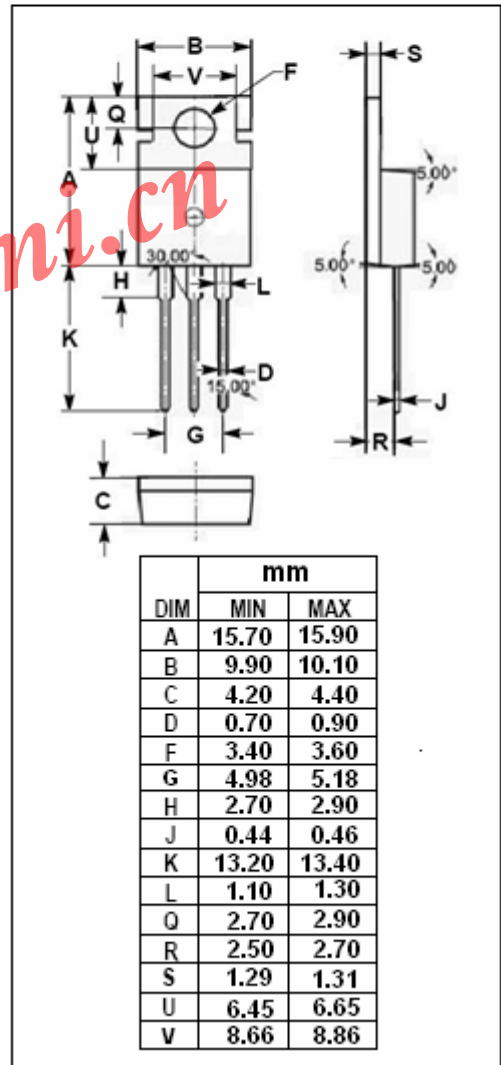
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-100	V
V _{CEO}	Collector-Emitter Voltage	-100	V
V _{EBO}	Emitter-Base Voltage	-7	V
I _C	Collector Current-Continuous	-5	A
I _{CM}	Collector Current-Peak	-10	A
I _B	Base Current-DC	-0.5	A
P _C	Collector Power Dissipation T _C =25°C	30	W
	Collector Power Dissipation T _a =25°C	1.5	
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}, I_B = -2\text{mA}$			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2\text{A}, I_B = -2\text{mA}$			-2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -100\text{V}, I_E = 0$			-1.0	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -7\text{V}, I_C = 0$			-5	mA
h_{FE-1}	DC Current Gain	$I_C = -2\text{A}; V_{CE} = -2\text{V}$	2000		20000	
h_{FE-2}	DC Current Gain	$I_C = -4\text{A}; V_{CE} = -2\text{V}$	500			

Switching times

t_{on}	Turn-on Time	$R_L = 25\ \Omega, V_{CC} \approx -50\text{V}$ $I_C = -2\text{A}; I_{B1} = -I_{B2} = -2\text{mA}$		0.5		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			1.0		μs

◆ h_{FE-1} Classifications

M	L	K
2000-5000	4000-10000	8000-20000