

isc Silicon PNP Darlingtion Power Transistor
2SB974
DESCRIPTION

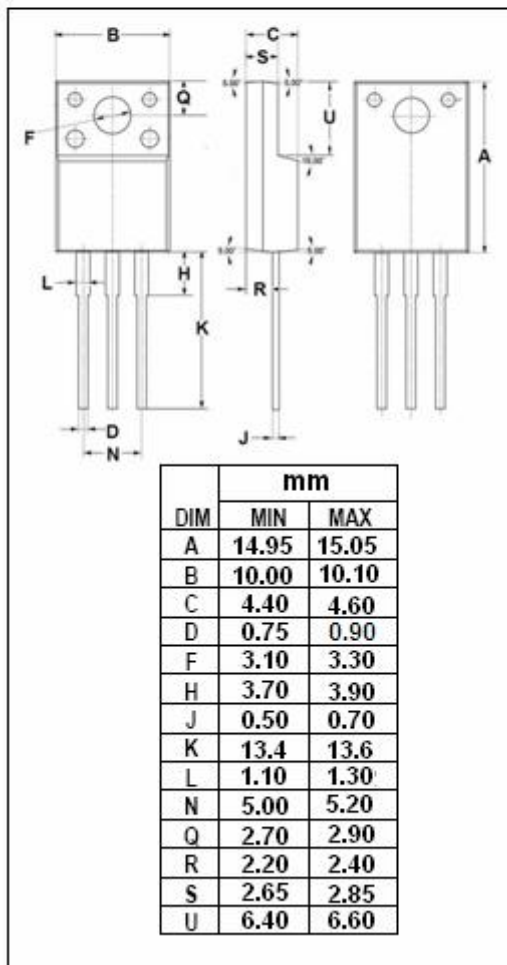
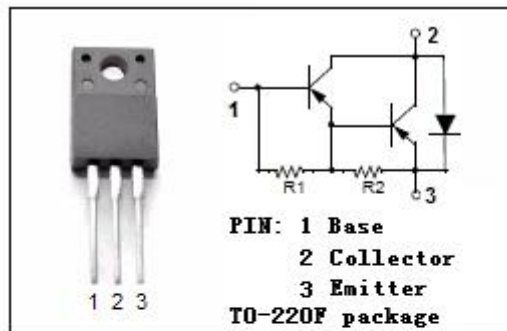
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min})@ I_C = -2\text{A}$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = -1.5\text{V}(\text{Max})@ I_C = -2\text{A}$
- Complement to Type 2SD1308
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

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

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

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 $T_C=25^\circ\text{C}$	30	W
	Collector Power Dissipation $T_a=25^\circ\text{C}$	1.5	
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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -2A, I _B = -2mA			-1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -2A, I _B = -2mA			-2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -100V, I _E = 0			-1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -7V; I _C = 0			-5	mA
h _{FE-1}	DC Current Gain	I _C = -2A; V _{CE} = -2V	2000		20000	
h _{FE-2}	DC Current Gain	I _C = -4A; V _{CE} = -2V	500			

Switching times

t _{on}	Turn-on Time			1.0		μ s
t _{stg}	Storage Time	R _L = 25 Ω, V _{CC} ≈ -50V I _C = -2A; I _{B1} = -I _{B2} = -2mA		3.5		μ s
t _f	Fall Time			1.2		μ s

◆ h_{FE-1} Classifications

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

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