

isc Silicon PNP Darlington Power Transistor

2SB974

DESCRIPTION

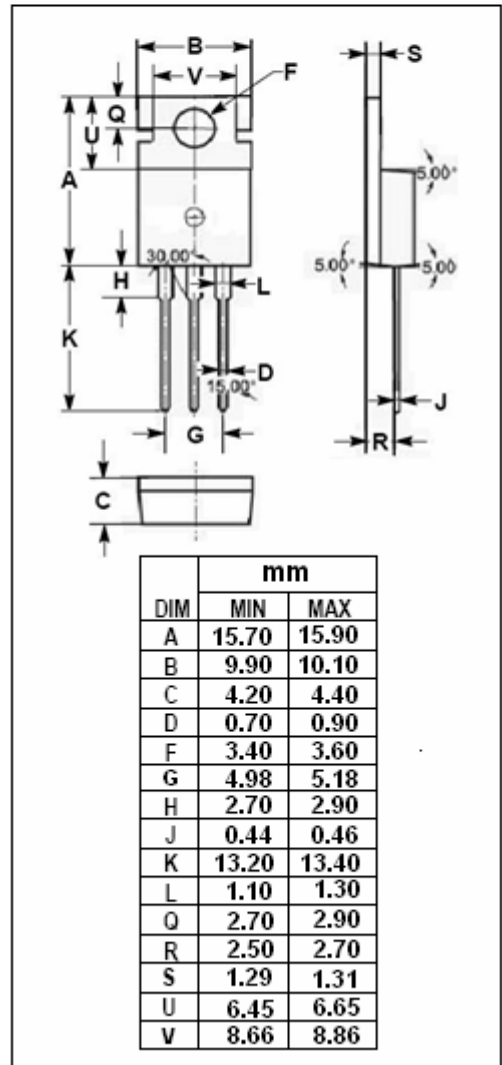
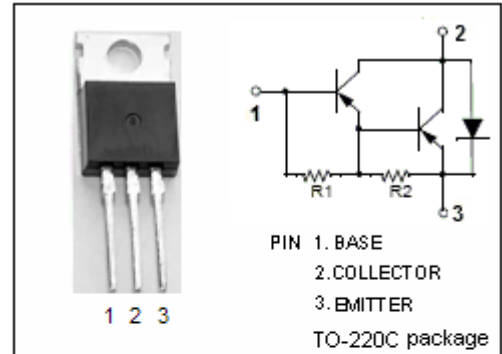
- High DC Current Gain-  
:  $h_{FE} = 2000(\text{Min}) @ I_C = -2\text{A}$
- Low Collector-Emitter Saturation Voltage-  
:  $V_{CE(\text{sat})} = -1.5\text{V}(\text{Max}) @ I_C = -2\text{A}$
- Complement to Type 2SD1308

APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	-100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-100	V
V <sub>EBO</sub>	Emitter-Base Voltage	-7	V
I <sub>C</sub>	Collector Current-Continuous	-5	A
I <sub>CM</sub>	Collector Current-Peak	-10	A
I <sub>B</sub>	Base Current-DC	-0.5	A
P <sub>C</sub>	Collector Power Dissipation T <sub>C</sub> =25°C	30	W
	Collector Power Dissipation T <sub>a</sub> =25°C	1.5	
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	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	$\mu\text{A}$
$I_{EBO}$	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		$\mu\text{s}$
$t_{stg}$	Storage Time			1.0		$\mu\text{s}$
$t_f$	Fall Time			1.0		$\mu\text{s}$

◆  $h_{FE-1}$  Classifications

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