

# isc Silicon PNP Darlington Power Transistor

## 2SB1024

### DESCRIPTION

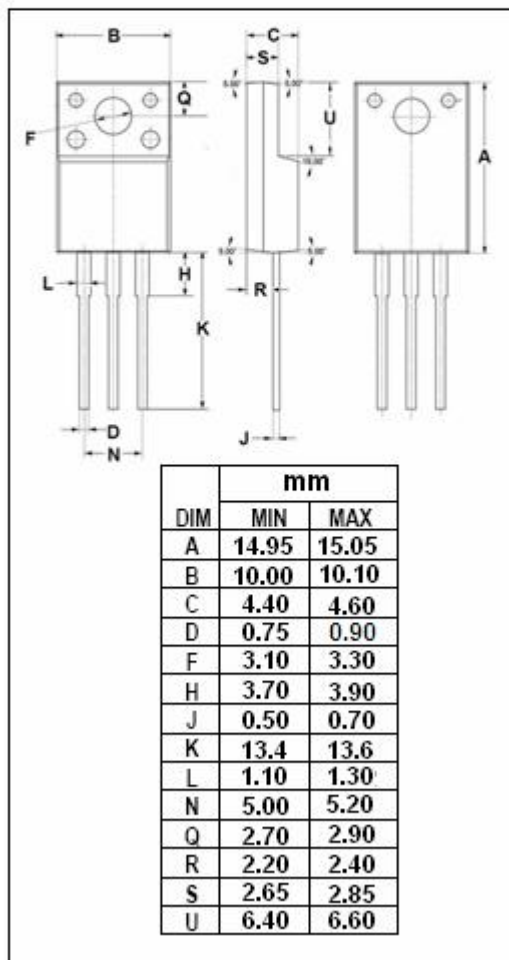
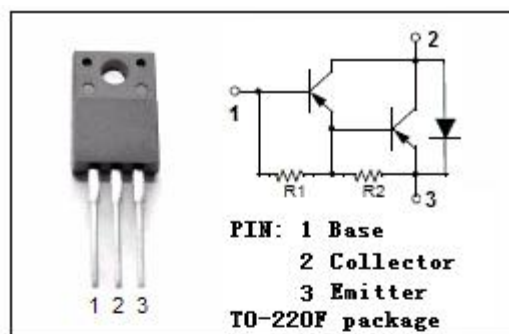
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = -1.5V(\text{Max.}) @ I_C = -3A$
- High DC Current Gain-  
:  $h_{FE} = 2000(\text{Min}) @ (V_{CE} = -2V, I_C = -1A)$
- Complement to Type 2SD1414
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for power amplifier applications.

### 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	-80	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-4	A
$I_{CM}$	Collector Current-Peak	-6	A
$I_B$	Base Current-Continuous	-0.3	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	20	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



**isc Silicon PNP Darlington Power Transistor****2SB1024****ELECTRICAL CHARACTERISTICS****T<sub>j</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -10mA ; I <sub>B</sub> = 0	-80			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -3A; I <sub>B</sub> = -6mA			-1.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -3A; I <sub>B</sub> = -6mA			-2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -100V; I <sub>E</sub> = 0			-20	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0			-2.5	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -1A; V <sub>CE</sub> = -2V	2000			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -3A; V <sub>CE</sub> = -2V	1000			

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