

isc Silicon PNP Darlington Power Transistor

2SB1023

DESCRIPTION

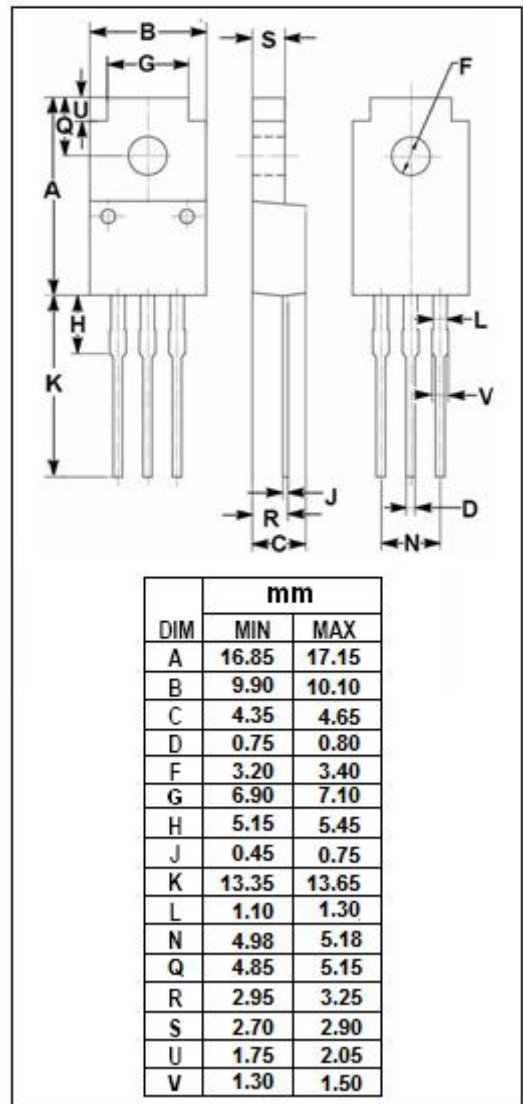
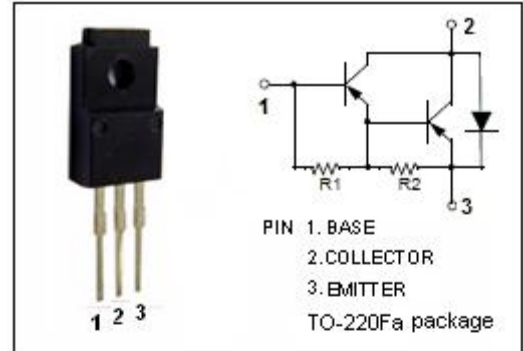
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min.}) @ I_C = -1\text{A}$
- Low Collector Saturation Voltage-
: $V_{CE(\text{sat})} = -1.5\text{V}(\text{Max}) @ I_C = -2\text{A}$
- Good Linearity of h_{FE}
- Complement to Type 2SD1413
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching applications.
- Hammer drive, pulse motor drive applications.
- Power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-3	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 Range	-55~150	$^\circ\text{C}$



isc Silicon PNP Darlington Power Transistor**2SB1023****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = -25mA; I _B = 0	-40			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -2A; I _B = -4mA			-1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -2A; I _B = -4mA			-2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -60V; I _E = 0			-20	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-2.5	mA
h _{FE-1}	DC Current Gain	I _C = -1A; V _{CE} = -2V	2000			
h _{FE-2}	DC Current Gain	I _C = -3A; V _{CE} = -2V	1000			

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