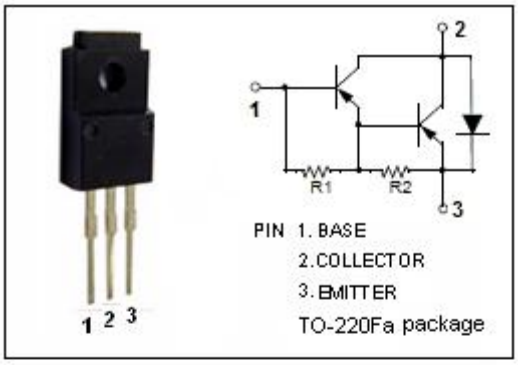
isc Silicon PNP Darlingtion Power Transistor — 2SB1023

DESCRIPTION

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

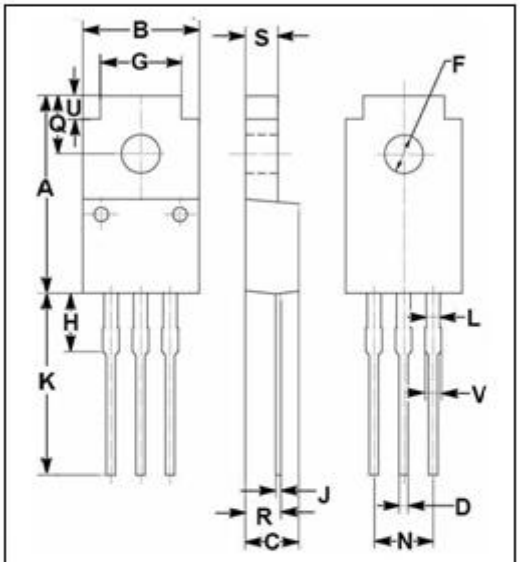


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	2	W
	Collector Power Dissipation @ T_C=25℃	20	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	16.85	17.15
B	9.90	10.10
C	4.35	4.65
D	0.75	0.80
F	3.20	3.40
G	6.90	7.10
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.95	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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			