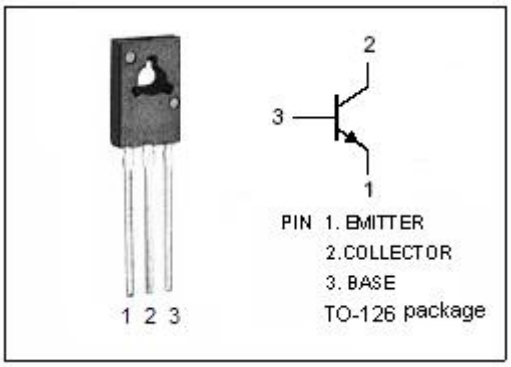
isc Silicon NPN Power Transistor 2N4923

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 80V(Min)
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 0.6V(Max.)@ I_C= 1A
- Wide Area of Safe Operation
- Complement to Type 2N4920
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

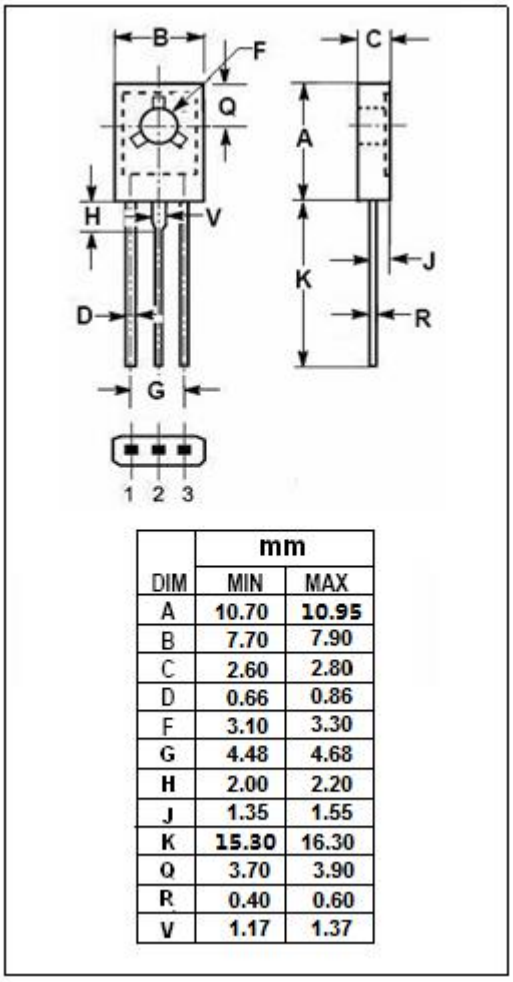


APPLICATIONS

- Designed for driver circuits, switching and amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1	A
I_{CM}	Collector Current-Peak	3	A
I_B	Collector Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_C=25℃	30	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	MAX
A	10.70	10.95
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	4.16	℃/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA; I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 0.1A			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1A; I_B= 0.1A			1.3	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 1A ; V_{CE}= 1V			1.3	V
I_{CEX}	Collector Cutoff Current	V_{CE}=80V;$V_{BE(off)}$= -1.5V V_{CE}=80V;$V_{BE(off)}$= -1.5V;T_C=125℃			0.1 0.5	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 40V; I_B= 0			0.5	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V; I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1.0	mA
h_{FE-1}	DC Current Gain	I_C= 50mA ; V_{CE}= 1V	40			
h_{FE-2}	DC Current Gain	I_C= 500mA ; V_{CE}= 1V	30		150	
h_{FE-3}	DC Current Gain	I_C= 1A ; V_{CE}= 1V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 0.25A;V_{CE}= 10V, f_{test}= 1MHz	3			MHz
C_{OB}	Output Capacitance	I_E= 0;V_{CB}= 10V; f_{test}= 100kHz			100	pF