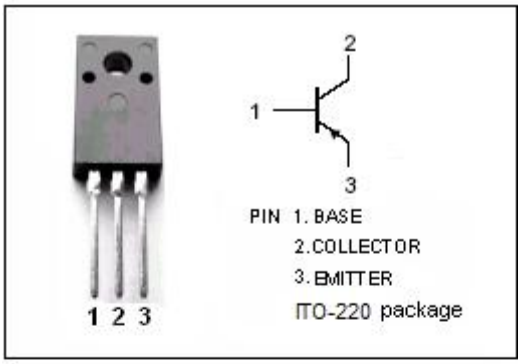
isc Silicon PNP Power Transistor 2SA1878

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= -80(V)(Min.)
- Low Collector Saturation Voltage
  :$V_{CE(sat)}$= -0.3(V)(Max.)@I_C= -2.5A
- Large Current Capability-I_C= -5A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

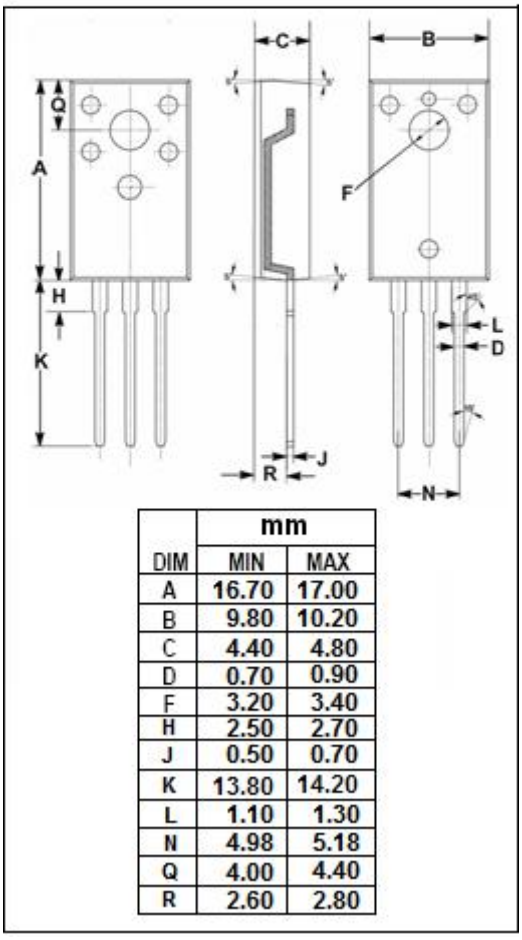


APPLICATIONS

- Designed for use as a driver in DC/DC converters and actuators.

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	-7	V
I_C	Collector Current-Continuous	-5	A
I_{CM}	Collector Current-Peak	-10	A
I_B	Base Current-Continuous	-1.5	A
I_{BM}	Base Current-Peak	-2	A
P_C	Total Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	16.70	17.00
B	9.80	10.20
C	4.40	4.80
D	0.70	0.90
F	3.20	3.40
H	2.50	2.70
J	0.50	0.70
K	13.80	14.20
L	1.10	1.30
N	4.98	5.18
Q	4.00	4.40
R	2.60	2.80

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	5	℃/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= -0.05A; I_B= 0	-80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -2.5A; I_B= -0.25A			-0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -2.5A; I_B= -0.25A			-1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -80V; I_E= 0			-100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= -80V; I_B= 0			-100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -7V; I_C= 0			-100	μA
h_{FE}	DC Current Gain	I_C= -2.5A; V_{CE}= -2V	70			
f_T	Current-Gain—Bandwidth Product	I_C= -0.5A; V_{CE}= -10V		50		MHz
Switching Times						
t_{on}	Turn-on Time	I_C= -2.5A, I_{B1}= -I_{B2}= -0.25A, R_L= 12Ω, V_{BB2}≈ -4V;			0.3	μs
t_{stg}	Storage Time				1.5	μs
t_f	Fall Time				0.2	μs

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