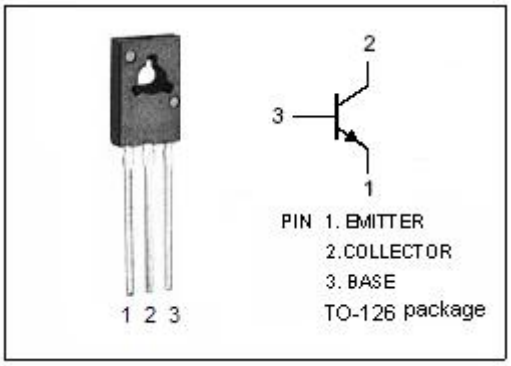
isc Silicon NPN Power Transistor — 2SC1847



DESCRIPTION

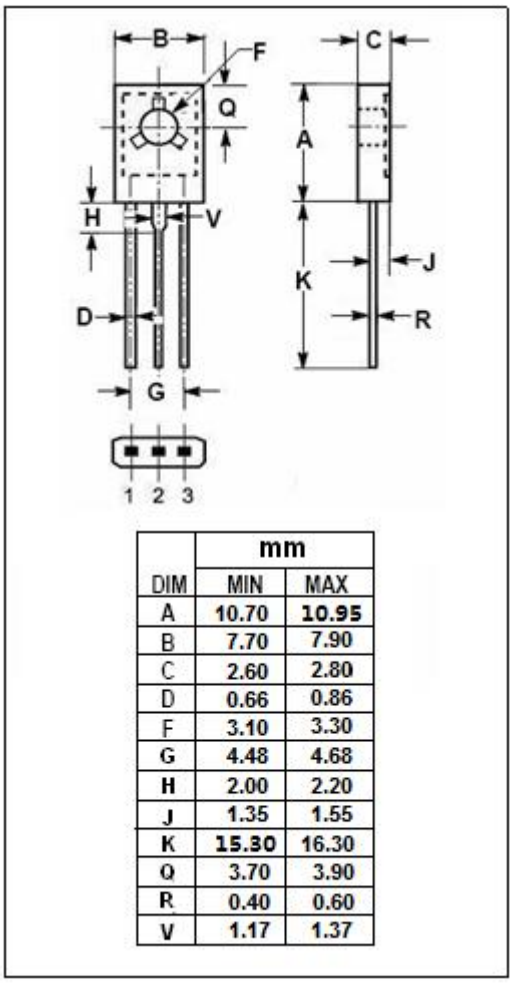
- High Collector Current-I_C= 1.5A
- Low Saturation Voltage
  : $V_{CE(sat)}$= 1V(Max)@ I_C= 2.0A, I_B= 0.2A
- Good Linearity of h_{FE}
- Complement to Type 2SA0886
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Suited for the output stage of 3 watts audio amplifier, voltage regulator, DC-DC converter and relay driver.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1.5	A
I_{CP}	Collector Current-Pulse	3.0	A
P_C	Collector Power Dissipation @ T_a=25℃	1.2*1	W
	Collector Power Dissipation @ T_C=25℃	5*2	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2.0A; I_B= 0.2A			1	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2.0A; I_B= 0.2A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 20V; I_E= 0			1.0	μA
I_{CEO}	Collector Emitter Current	V_{CB}= 10V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			10	μA
h_{FE}	DC Current Gain	I_C= 1A ; V_{CE}= 5V	80		220	
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 5V		150		MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 20V,f_{test}= 1MHz		35		pF

h_{FE} Classifications

Q	R
80-160	120-220