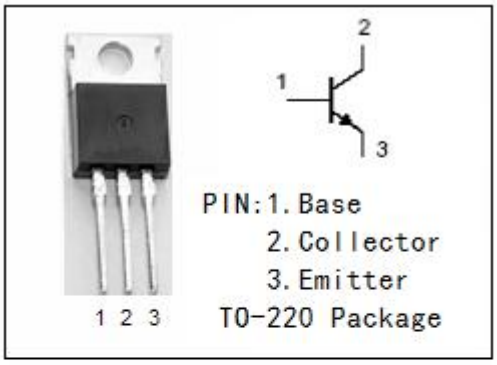
isc Silicon NPN Power Transistor — BD841

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 60V(Min)
- High DC Current Gain
- Low Saturation Voltage
- Complement to Type BD842
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

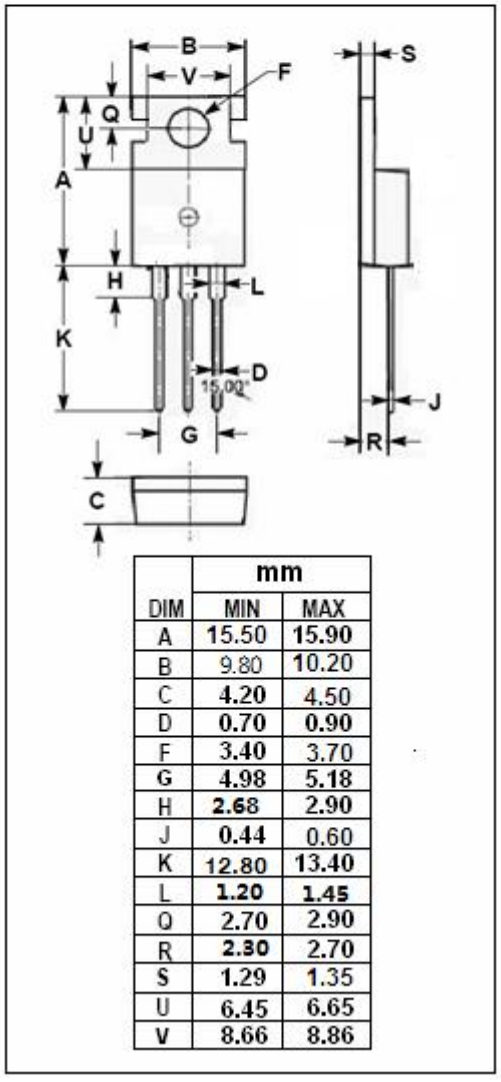
- Designed for use in television circuits and audio applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	1.5	A
I_{CP}	Collector Current-Peak	3.0	A
P_C	Collector Power Dissipation @ T_a=25℃	2	W
	Collector Power Dissipation @ T_C=25℃	10	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	12.5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	62.5	℃/W



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

isc Silicon NPN Power Transistor BD841

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Breakdown Voltage	I_C= 30mA; I_B= 0	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 100mA			0.8	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 1A ; V_{CE}= 2V			1.3	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 30V; I_E= 0			0.1	uA
		V_{CB}= 30V; I_E= 0; T_C= 125℃			10	
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			10	uA
h_{FE-1}	DC Current Gain	I_C= 5mA ; V_{CE}= 2V	25			
h_{FE-2}	DC Current Gain	I_C= 150mA ; V_{CE}= 2V	40		250	
h_{FE-3}	DC Current Gain	I_C= 1A ; V_{CE}= 2V	25			
f_T	Current-Gain—Bandwidth Product	I_C= 50mA ; V_{CE}= 5V		125		MHz