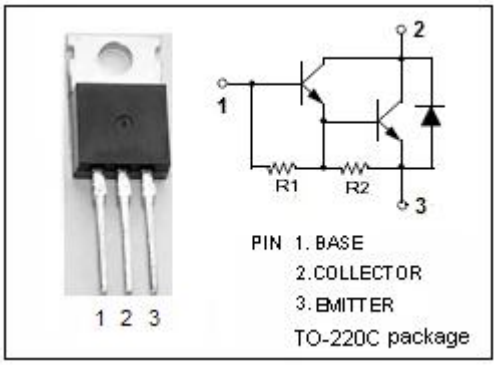
isc Silicon NPN Power Transistor — BU941ZT

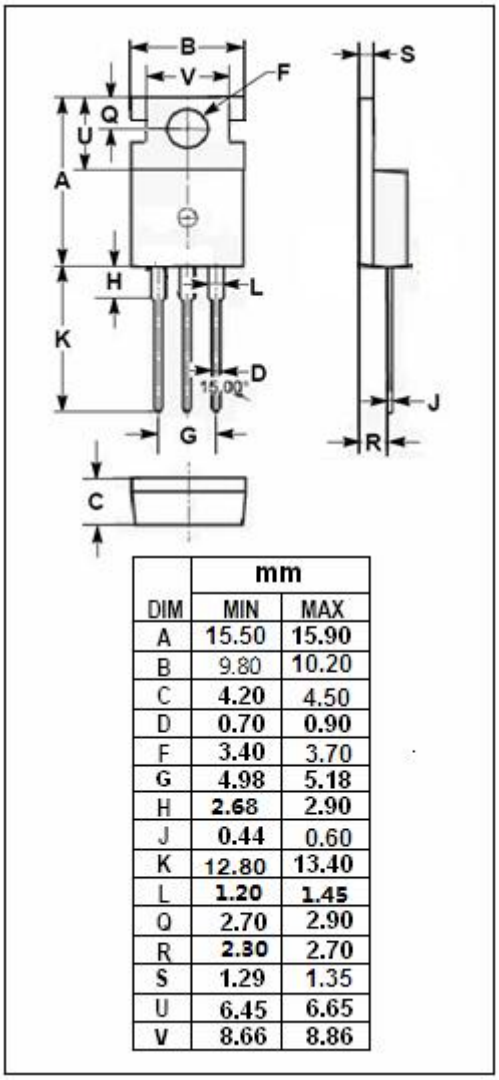


DESCRIPTION

- High Voltage
- DARLINGTON
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High ruggedness electronic ignitions
- High voltage ignition coil driver



DIM	mm MIN	mm 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

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current- Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current	1	A
I_{BM}	Base Current-Peak	5	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
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	1.2	℃/W

isc Silicon NPN Power Transistor BU941ZT

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	350			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 8 A; I_B= 100mA			1.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10 A; I_B= 250mA			1.8	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 8 A; I_B= 100mA			2.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 10 A; I_B= 250mA			2.5	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 300V;I_B= 0 V_{CE}= 300V;I_B= 0;T_j= 125℃			0.1 0.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			20	mA
h_{FE}	DC Current Gain	I_C= 5A ; V_{CE}= 10V	300			
V_{ECF}	C-E Diode Forward Voltage	I_F= 10A			2.5	V