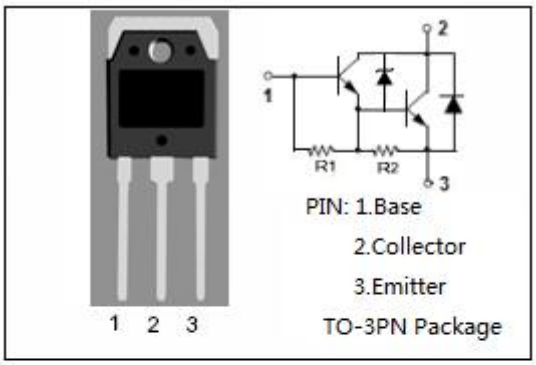
isc Silicon NPN Darlington Power Transistor — BU931ZP

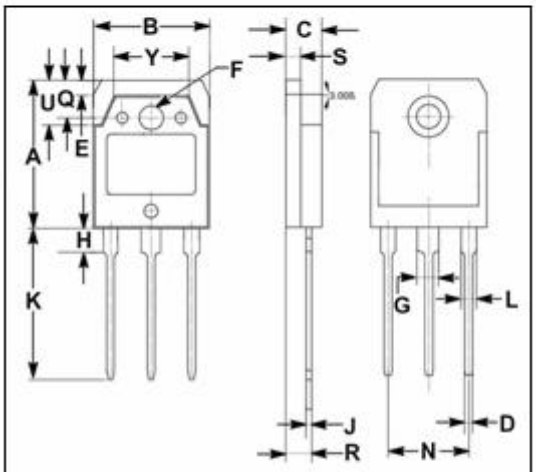


DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 350V(Min.)
- High Reliability
- Low Collector Saturation Voltage
- 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	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	350	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current- Continuous	20	A
I_B	Base Current	5	A
P_C	Collector Power Dissipation @T_C=25℃	125	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-40~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.0	℃/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	350			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 7 A; I_B= 70mA			1.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 8 A; I_B= 100mA			1.8	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	I_C= 10 A; I_B= 150mA			2.0	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= 150mA			2.5	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	I_C= 5A ; V_{CE}= 2V		1.67	2.0	V
$V_{BE(on)-2}$	Base-Emitter On Voltage	I_C= 10A ; V_{CE}= 2V		2.0	2.4	V
I_{CBO}	Collector Cutoff Current	V_{CB}= RatedV_{CBO}; I_E= 0			0.25	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			50	mA
h_{FE}	DC Current Gain	I_C= 5A; V_{CE}= 2V	300			
V_{ECF}	C-E Diode Forward Voltage	I_F= 10A			2.5	V