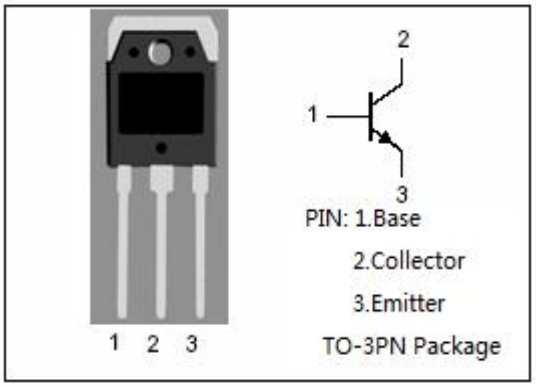
isc Silicon NPN Power Transistor — BU999

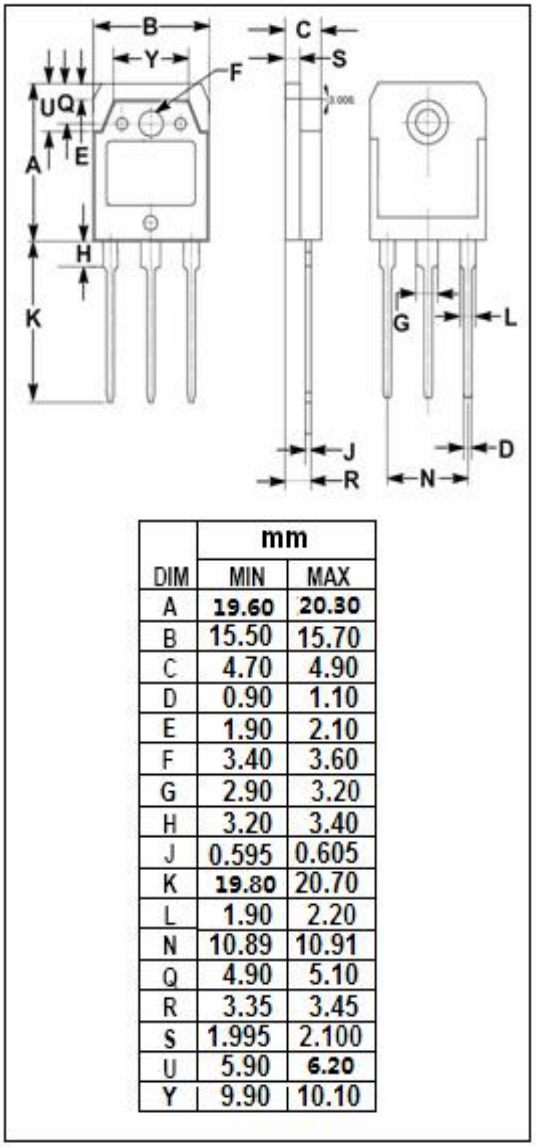
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 140V(Min)
- High Switching Speed
- High Power Dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching and linear applications.





DIM	mm MIN	mm 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	160	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	25	A
I_{CP}	Collector Current-Pulse	40	A
I_B	Base Current-Continuous	10	A
P_C	Collector Power Dissipation @ T_C=25℃	106	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	2.08	℃/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	140			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 1A			0.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 25A; I_B= 2.5A			1.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 10A; I_B= 1A			1.8	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 25A; I_B= 2.5A			2.5	V
$V_{BE(on)}$	Base -Emitter On Voltage	I_C= 10A; V_{CE}= 2V			1.8	V
I_{CEX}	Collector Cutoff Current	V_{CE}= 140V; V_{BE}= -1.5V			10	μA
I_{CBO}	Collector Cutoff Current	V_{CB}= 160V; I_E= 0			100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 70V; I_B= 0			50	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			100	μA
h_{FE-1}	DC Current Gain	I_C= 0.5A; V_{CE}= 2V	35			
h_{FE-2}	DC Current Gain	I_C= 10A; V_{CE}= 2V	25		100	
h_{FE-3}	DC Current Gain	I_C= 25A; V_{CE}= 2V	12			