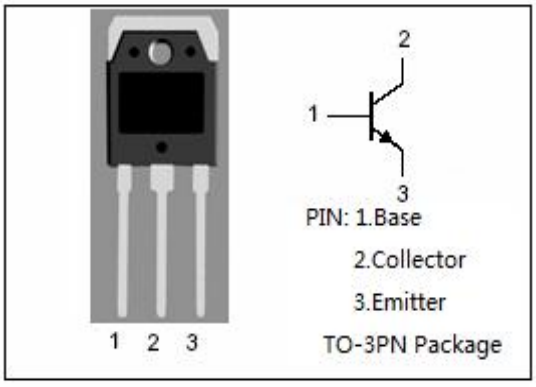
isc Silicon NPN Power Transistor — BU433

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 375V(Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

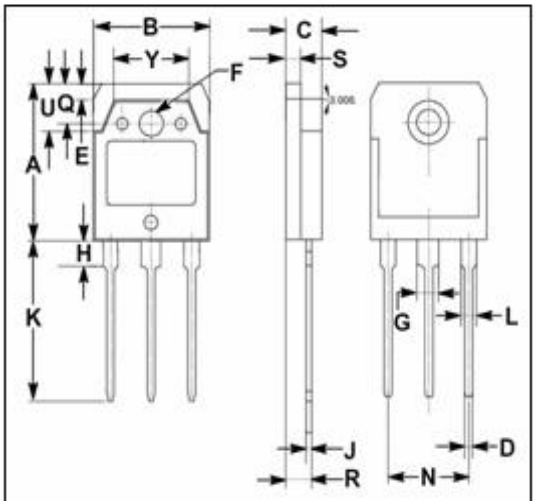
- Designed for use in the switch-mode power supply of color TV receivers.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage V_{BE}= 0	800	V
V_{CEO}	Collector-Emitter Voltage	375	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	2	A
I_{BM}	Base Current-Peak	3	A
P_C	Collector Power Dissipation @ T_C=25℃	70	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	1.1	℃/W



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

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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= 5mA ;I_B= 0	375			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 1.25A			3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.4	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 1.25A			1.6	V
I_{CES}	Collector Cutoff Current	V_{CEM}=800V;V_{BE}= 0 V_{CEM}=800V;V_{BE}= 0;T_J=125℃			1.0 2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 10V; I_C=0			10	mA
h_{FE}	DC Current Gain	I_C= 0.6A ; V_{CE}= 5V		40		
f_T	Current Gain-Bandwidth Product	I_C= 0.2A ; V_{CE}= 10V;f_{test}= 1MHz		6		MHz
Switching Times						
t_{on}	Turn-On Time	I_C= 2.5A; I_{B1}= 0.5A; I_{B2}= -1A; V_{CC}= 250V		0.5	0.6	μs
t_{stg}	Storage Time			2.0	3.5	μs
t_f	Fall Time			0.45	0.7	μs