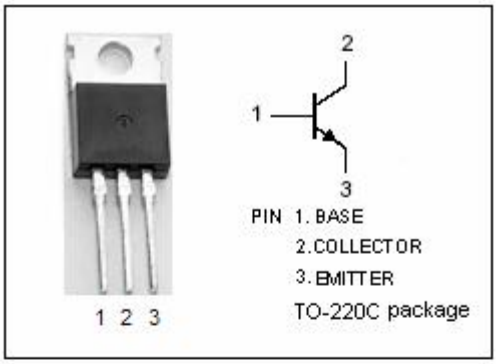
isc Silicon NPN Power Transistor — 2ST31A



DESCRIPTION

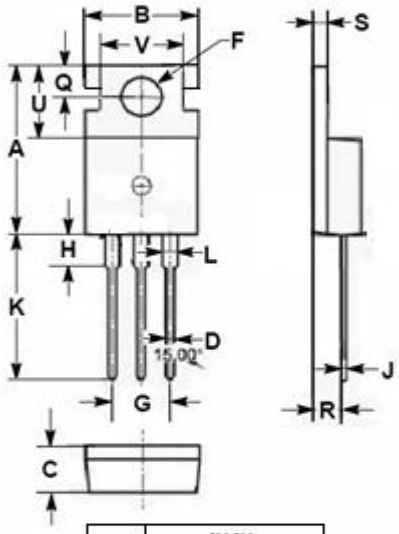
- Collector-Emitter sustaining Voltage
  : V_{CEO}=60V(Min)
- Good Linearity of h_{FE}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Linear and switching industrial 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	3	A
I_B	Base Current- Continuous	1	A
P_C	Total Power Dissipation @ T_C=25℃	40	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



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

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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= 3A; I_B= 375mA			1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 375mA			1.45	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V ; I_E= 0			0.3	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}=5V; I_C= 0			1.0	mA
h_{FE-1}	DC Current Gain	I_C=20mA ; V_{CE}=4V	100		150	
h_{FE-2}	DC Current Gain	I_C=1A ; V_{CE}=4V	25			