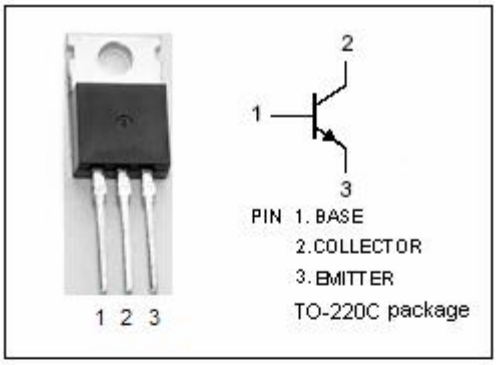
isc Silicon NPN Power Transistor — 2SC2831

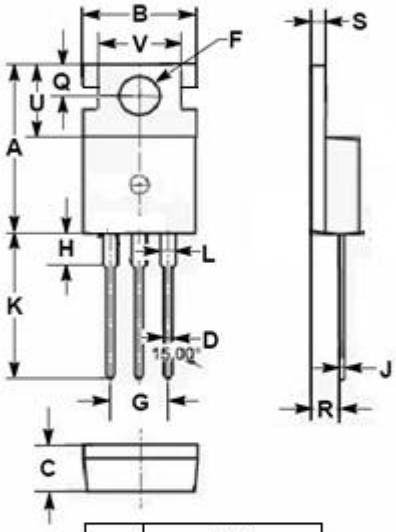


DESCRIPTION

- Low Collector Saturation Voltage
- Good Linearity of h_{FE}
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulators applications



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	800	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Pulse	3	A
P_C	Collector Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA ; I_B= 0	500			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 0.2A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1A; I_B= 0.2A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}=800V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0			100	μA
h_{FE-1}	DC Current Gain	I_C= 0.1A ; V_{CE}= 5V	15			
h_{FE-2}	DC Current Gain	I_C= 1A ; V_{CE}= 5V	8			
f_T	Current-Gain—Bandwidth Product	I_E= 0.2A ; V_{CE}= 10V		2.5		MHz