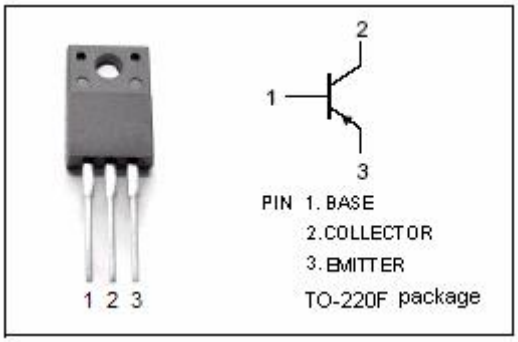
isc Silicon PNP Power Transistor 2SA1931

DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= -0.4V(Max.)@I_C= -3A
- High Switching Speed
- Complement to Type 2SC3299
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

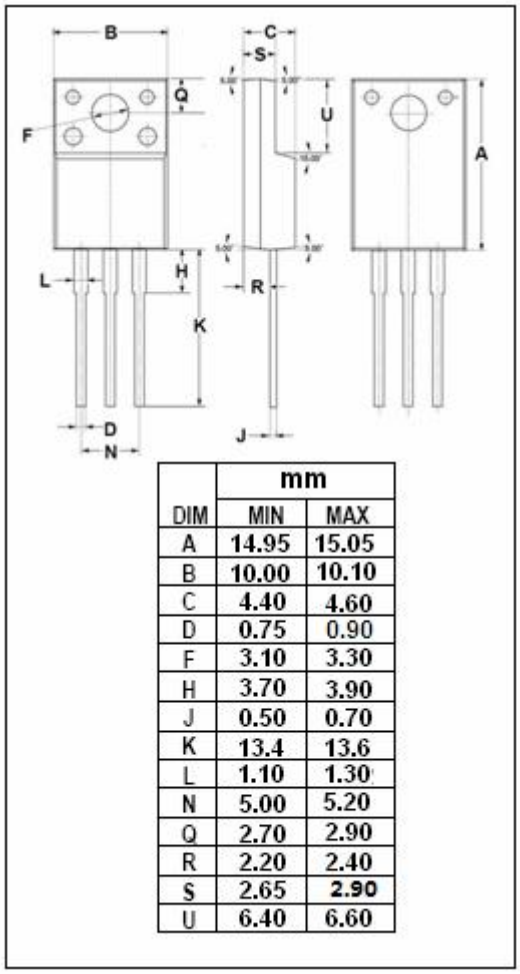


APPLICATIONS

- Designed for high current switching 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	-5	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @T_a=25℃	2	W
	Collector Power Dissipation @T_C=25℃	25	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= -10mA; I_B= 0	-60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -3A; I_B= -0.15A			-0.4	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -3A; I_B= -0.15A			-1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -50V; I_E= 0			-1.0	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5V; I_C= 0			-1.0	μA
h_{FE-1}	DC Current Gain	I_C= -1A; V_{CE}= -1V	70		240	
h_{FE-2}	DC Current Gain	I_C= -3A; V_{CE}= -1V	30			
f_T	Current-Gain—Bandwidth Product	I_C= -1A; V_{CE}= -4V		60		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= -10V; f= 1MHz		230		pF
Switching Times						
t_{on}	Turn-On Time	I_{B1}= -I_{B2}= -0.15A; V_{CC}= -30V; R_L= 10Ω; Duty Cycle≤1%		0.1		μs
t_{stg}	Storage Time			1.0		μs
t_f	Fall Time			0.1		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240