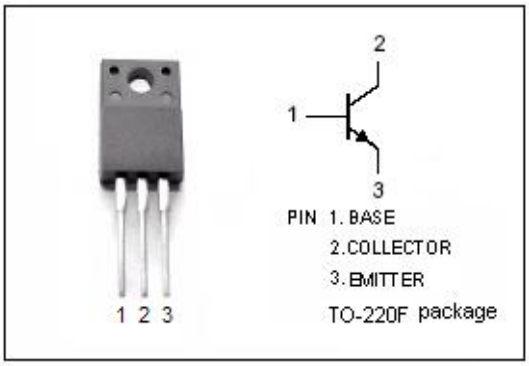
isc Silicon NPN Power Transistor — 2SC4130

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 400V(Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

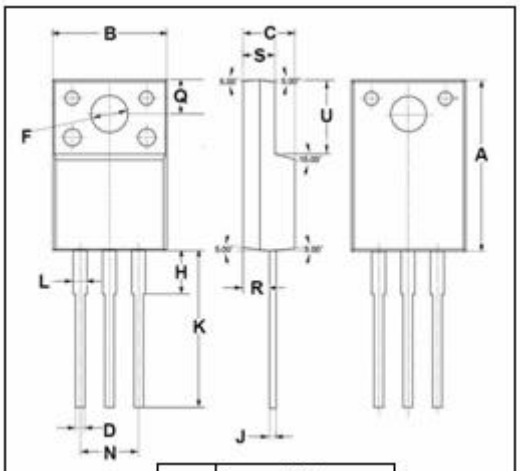
APPLICATIONS

- Designed for switching regulator and general purpose applications.



ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	14	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @T_C=25℃	30	W
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= 25mA; I_B= 0	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			1.3	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 10V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 3A; V_{CE}= 4V	10		30	
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1MHz		50		pF
f_T	Current-Gain—Bandwidth Product	I_E= -0.5A; V_{CE}= 12V		15		MHz
Switching Times						
t_{on}	Turn-On Time	I_C= 3A; I_{B1}= 0.3A; I_{B2}= -0.6A; V_{CC}= 200V; R_L= 67Ω			1.0	μs
t_{stg}	Storage Time				2.2	μs
t_f	Fall Time				0.5	μs