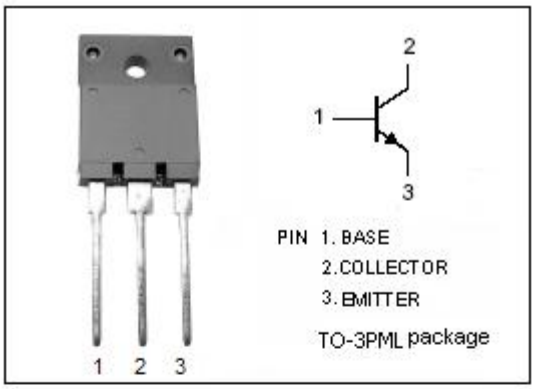
isc Silicon NPN Power Transistor — 2SC4430

DESCRIPTION

- NPN triple diffused planar silicon transistor
- High Switching Speed
- Wide Area of Safe Operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

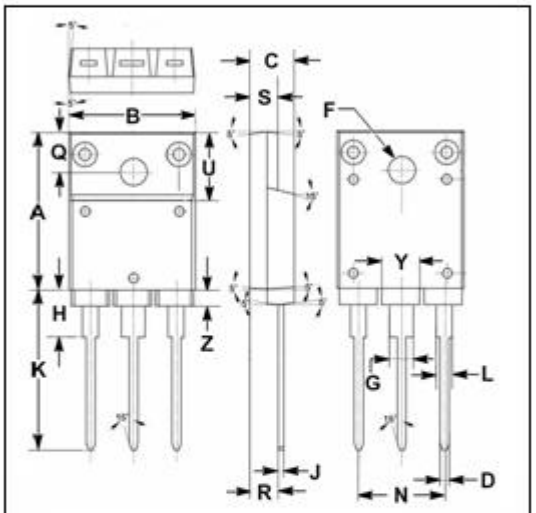


APPLICATIONS

- Switching regulator applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1100	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current- Continuous	12	A
I_{CM}	Collector Current- Peak	20	A
P_C	Collector Power Dissipation @ T_C=25℃	65	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	19.90	20.10
B	15.90	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.10
H	5.90	6.10
J	0.595	0.605
K	22.30	22.50
L	1.90	2.10
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.40
U	9.90	10.10
Y	4.70	4.90
Z	1.90	2.10

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 6A; I_B= 1.2A			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 6A; I_B= 1.2A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 800V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}=7V; I_C= 0			100	uA
h_{FE-1}	DC Current Gain	I_C= 0.8A; V_{CE}= 5V	10		40	
h_{FE-2}	DC Current Gain	I_C= 4A; V_{CE}= 5V	8			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1MHz		215		pF
f_T	Current-Gain—Bandwidth Product	I_E= -0.8A; V_{CE}= 10V		15		MHz

◆ **h_{FE-1} Classifications**

K	L	M
10-20	15-30	20-40