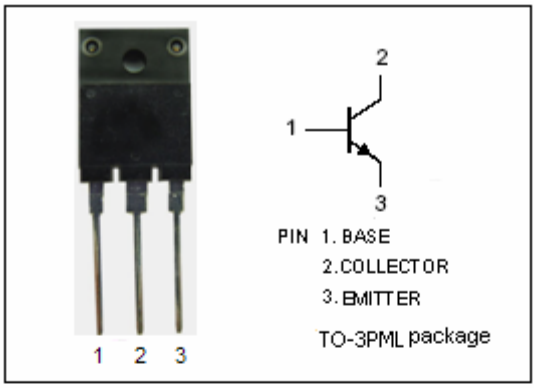
isc Silicon NPN Power Transistor KSC5030F



DESCRIPTION

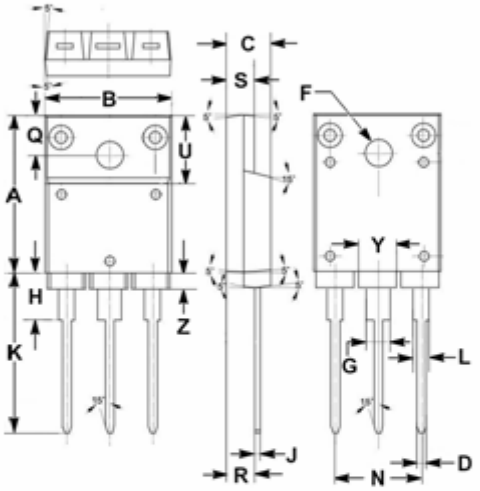
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 800V(Min)
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Designed for switching regulator and general purpose applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1100	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ T_C=25℃	60	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
$V_{CEX(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 3A ; I_{B2}= 0.6A; L= 2mH,Clamped	800			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	1100			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 5mA; R_{BE}= ∞	800			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 800V; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			10	μA
h_{FE-1}	DC Current Gain	I_C= 0.4A; V_{CE}= 5V	10		40	
h_{FE-2}	DC Current Gain	I_C= 2A; V_{CE}= 5V	8			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1MHz		120		pF
f_T	Current-Gain—Bandwidth Product	I_C= 0.4A ; V_{CE}= 10V		15		MHz
Switching Times; Resistive Load						
t_{on}	Turn-On Time	I_C= 4A; I_{B1}= 0.8A; I_{B2}= -1.6A; V_{CC}= 400V; R_L= 100Ω			0.5	μs
t_s	Storage Time				3.0	μs
t_f	Fall Time				0.3	μs

◆ **h_{FE-1} Classifications**

N	R	O
10-20	15-30	20-40