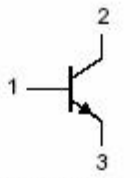
isc Silicon NPN Power Transistor — KSC5027



PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

DESCRIPTION

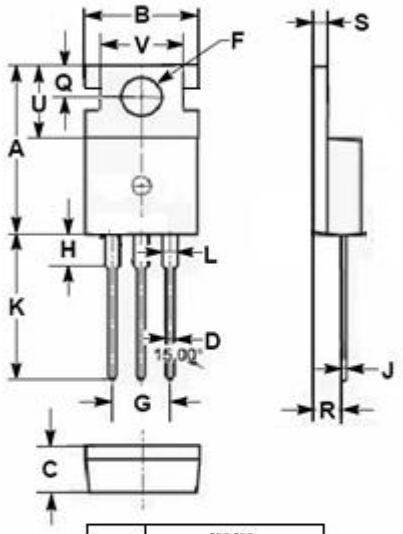
- Collector-Emitter Sustaining Voltage-
  :$V_{CEO(SUS)}$= 800V(Min)
- High Speed Switching
- Low Collector Saturation Voltage
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for switching regulator, DC-DC converter and ultrasonic appliance 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	3	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ T_C=25℃	50	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 5mA; I_B= 0	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1.5A; I_B= 0.3A			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1.5A; I_B= 0.3A			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= 0.2A ; V_{CE}= 5V	10		40	
h_{FE-2}	DC Current Gain	I_C= 1A ; V_{CE}= 5V	8			

◆ **h_{FE-1} Classifications**

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