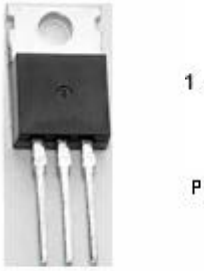
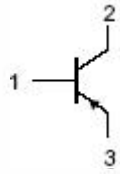
isc Silicon PNP Power Transistor — 2SA1009A

DESCRIPTION

- Low Collector Saturation Voltage-
  : VCE(sat)= -1V(Max.)@ IC= -0.3A
- Fast Switching Speed
- Wide Reverse Bias Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation





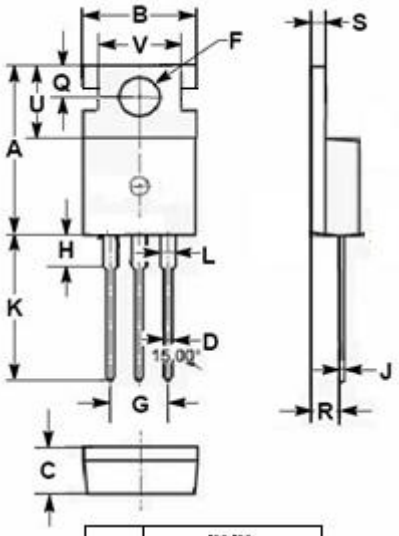
PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

APPLICATIONS

- Designed for switching regulators, DC/DC converters and High frequency power amplifier application.

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-400	V
V_{CEO}	Collector-Emitter Voltage	-400	V
V_{EBO}	Emitter-Base Voltage	-7.0	V
I_C	Collector Current-Continuous	-2.0	A
I_{CM}	Collector Current-Peak	-4.0	A
P_C	Collector Power Dissipation@ T_a=25℃	15	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	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	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= -0.3A; I_B= -0.06A, L=1mH	-400		V
$V_{CEX(SUS)-1}$	Collector-Emitter Sustaining Voltage	I_C= -0.3A; I_{B1}=-I_{B2}= -0.06A, L=180 μ H, clamped	-400		V
$V_{CEX(SUS)-2}$	Collector-Emitter Sustaining Voltage	I_C= -0.6A; I_{B1}= -0.2A; -I_{B2}= 0.06A, L= 180 μ H, clamped	-400		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= -0.3A; I_B= -0.06A		-1	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= -0.3A; I_B= -0.06A		-1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= -400V; I_E= 0		-10	μ A
I_{CER}	Collector Cutoff Current	V_{CE}= -400V ;R_{BE}= 51Ω ,T_a=125℃		-1.0	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= -400V; $V_{BE(off)}$= -1.5V V_{CE}= -400V; $V_{BE(off)}$= -1.5V, T_a=125℃		-10 -1.0	μ A mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -5.0V; I_C= 0		-10	μ A
h_{FE-1}	DC Current Gain	I_C= -0.1A; V_{CE}= -5V	20	200	
h_{FE-2}	DC Current Gain	I_C= -0.3A; V_{CE}= -5V	10		

◆ **h_{FE-1} Classifications**

M	L	K	J	H
20-40	30-60	40-80	60-120	100-200