INCHANGE Semiconductor

isc Silicon NPN Power Transistor   2SD2055

DESCRIPTION

- High DC Current Gain -
  : h_{FE} =20(Min)@ I_C= 4A
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 60V(Min)
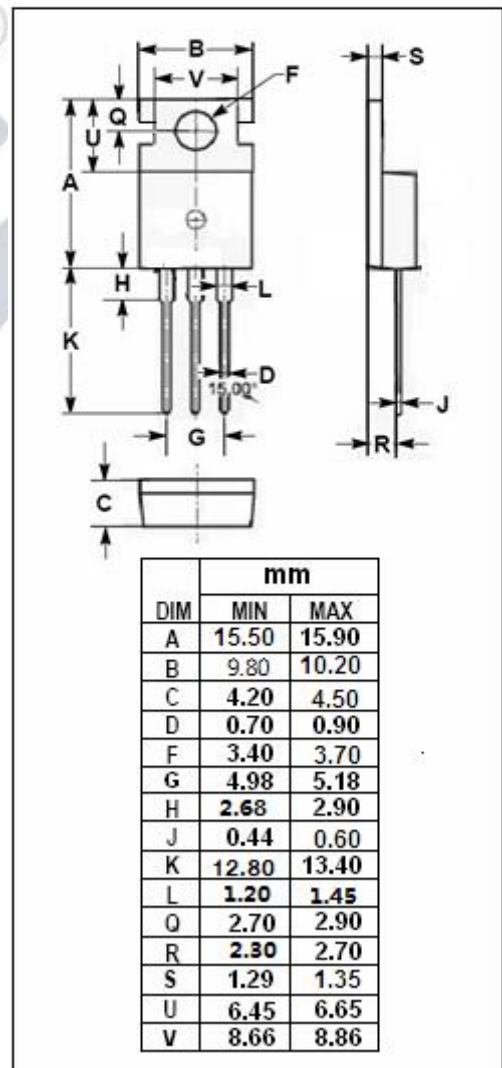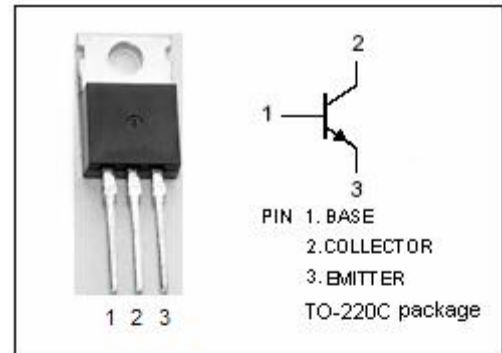- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in high power audio amplifiers utilizing complementary or quasi complementary circuits.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current	6	A
P_C	Collector Power Dissipation @ T_C=25℃	40	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\,j-c}$	Thermal Resistance, Junction to Case	1.39	℃/W

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	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA ;I_B= 0	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.3A		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A		1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A ; V_{CE}= 5V		1.6	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V;I_E= 0		0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0		0.1	mA
h_{FE-1}	DC Current Gain	I_C= 1A ; V_{CE}= 5V	50		
h_{FE-2}	DC Current Gain	I_C= 4A ; V_{CE}= 5V	20		
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 10V; f_{test}= 1.0MHz	5		MHz