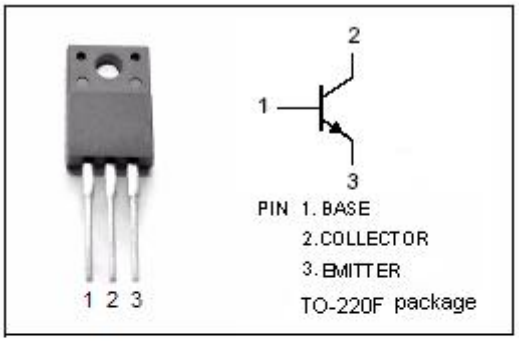
isc Silicon NPN Power Transistors — KSD1406

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 60V(Min)
- Collector Current-I_C= 3A(Max.)
- Low Collector Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

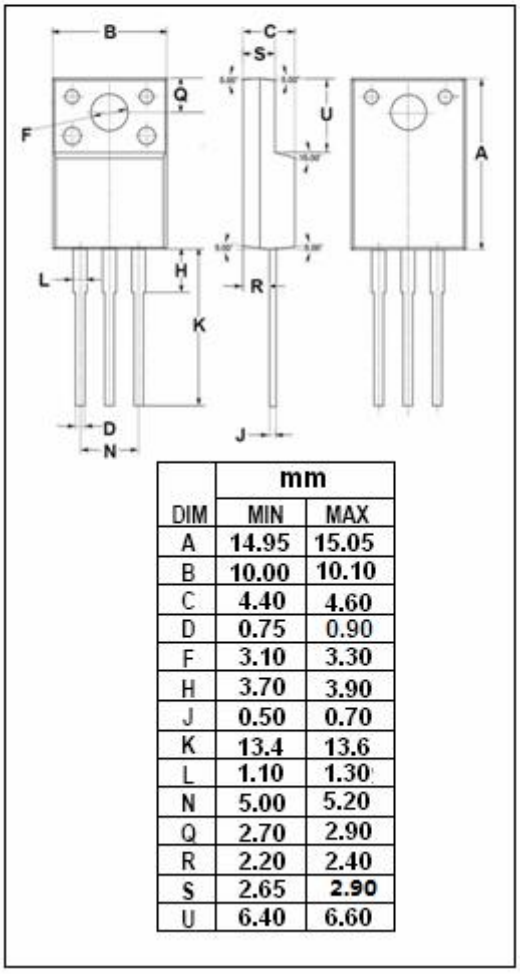
- Low frequency power amplifier

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_B	Base Current-Continuous	0.5	A
P_T	Total Power Dissipation @ T_C=25℃	25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	5	℃/W



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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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= 50mA; I_B= 0	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.3A			1.0	V
$V_{BE(On)}$	Base-Emitter On Voltage	I_C= 0.5A; V_{CE}= 5V			1.0	V
I_{CBO}	Collector Cutoff Current	At rated Voltage			10	μA
I_{CEO}	Collector Cutoff Current	At rated Voltage			10	μA
I_{EBO}	Emitter Cutoff Current	At rated Voltage			10	μA
h_{FE-1}	DC Current Gain	I_C= 0.5A; V_{CE}= 5V	60		320	
h_{FE-2}	DC Current Gain	I_C= 3A; V_{CE}= 5V	20			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= 5V		3		MHz

◆ **h_{FE-1} Classifications**

O	Y	G
60-120	100-200	150-300