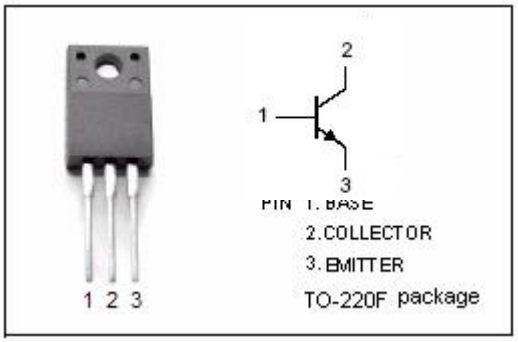
isc Silicon NPN Power Transistor — 2SD2012

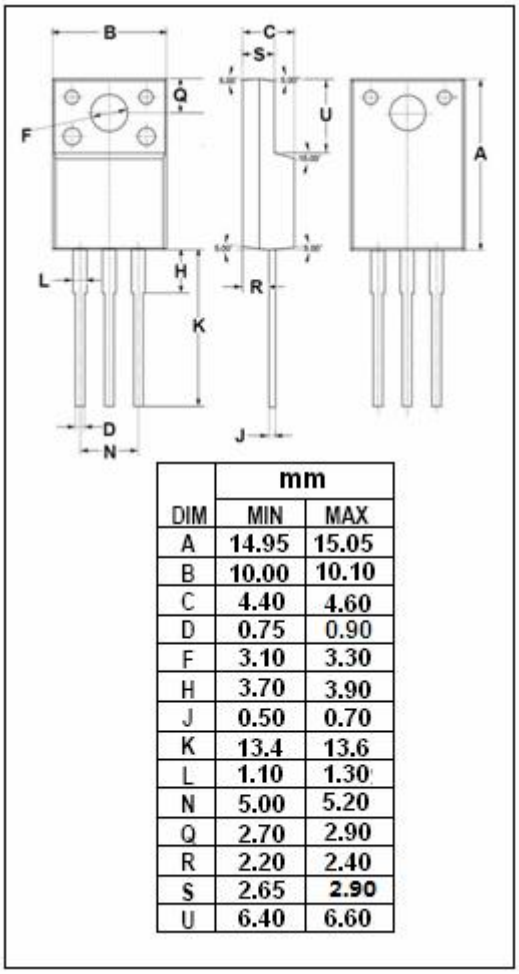
DESCRIPTION

- High DC Current Gain-
  : h_{FE}= 100 (Min)@ I_C= 0.5A
- Low Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V (Max)
- High Power Dissipation
  : P_C= 25 W(Max)@ T_C= 25℃
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed for audio frequency power amplifier applications



DIM	mm MIN	mm 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

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_C	Collector Power Dissipation @ T_a=25℃	2.0	W
	Collector Power Dissipation @ T_C=25℃	25	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 30mA ; I_B= 0	60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			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	V_{CB}= 60V ; I_E=0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V ; I_C=0			0.1	mA
h_{FE-1}	DC Current Gain	I_C= 0.5A ; V_{CE}= 5V	100		320	
h_{FE-2}	DC Current Gain	I_C= 2A ; V_{CE}= 5V	20			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 5V		3		MHz
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V; f_{test}= 1.0MHz		35		pF