

isc Silicon NPN Power Transistor
2SD2012
DESCRIPTION

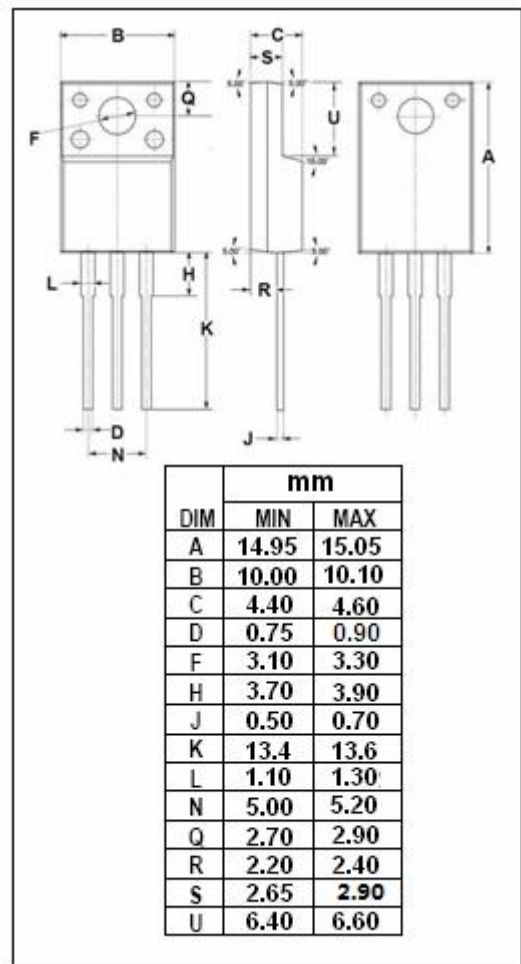
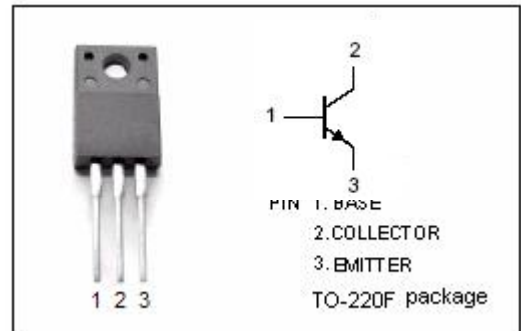
- High DC Current Gain-
: $h_{FE} = 100$ (Min) @ $I_C = 0.5A$
- Low Saturation Voltage-
: $V_{CE(sat)} = 1.0V$ (Max)
- High Power Dissipation
: $P_C = 25 W$ (Max) @ $T_C = 25^\circ C$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio frequency power amplifier applications

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$)

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 @ $T_a = 25^\circ C$	2.0	W
	Collector Power Dissipation @ $T_C = 25^\circ C$	25	
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-55~150	$^\circ C$



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ELECTRICAL CHARACTERISTICS

T_c=25°C 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

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