

DESCRIPTION

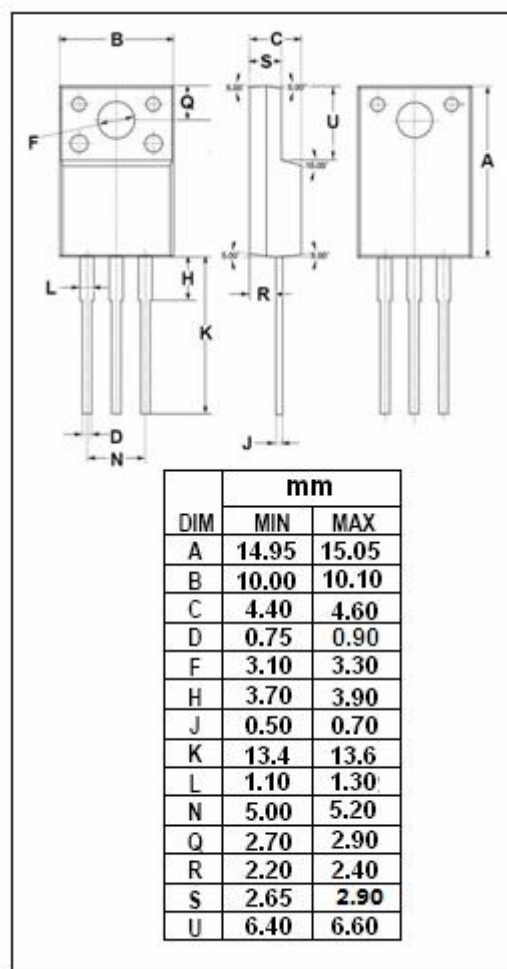
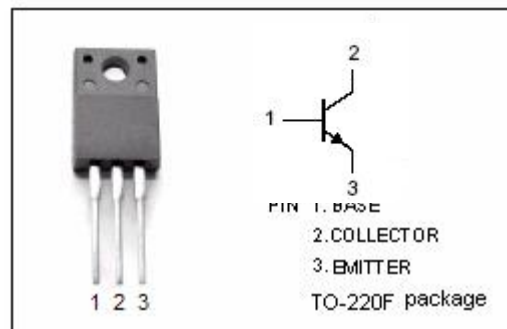
- High DC Current Gain-
: $h_{FE} = 100$ (Min)@ $I_C = 0.5A$
- Low Saturation Voltage-
: $V_{CE(sat)} = 1.0V$ (Max)
- High Power Dissipation
: $P_C = 25 W$ (Max)@ $T_C = 25^\circ C$

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	$^\circ C$



SPTECH Silicon NPN Power Transistor

2SD2012

ELECTRICAL CHARACTERISTICS

 $T_c=25^{\circ}\text{C}$ unless otherwise specified

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