

Silicon NPN Power Transistor

2SD2107

DESCRIPTION

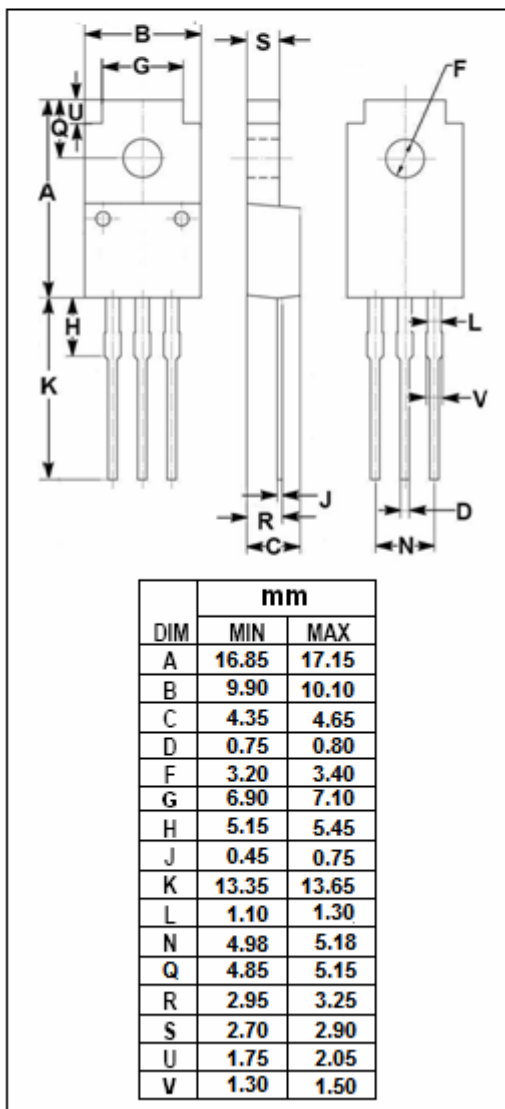
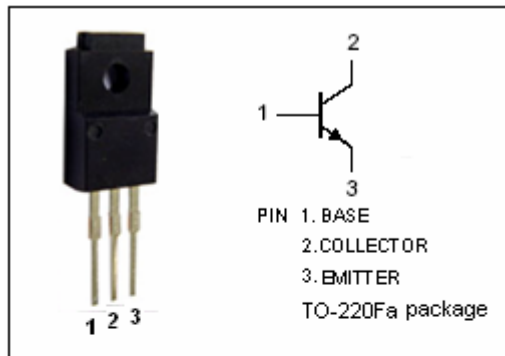
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V$ (Min)
- Low Collector Saturation Voltage

APPLICATIONS

- Designed for low frequency power amplifier applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	8	A
P_C	Collector Power Dissipation @ $T_C=25$	25	W
	Collector Power Dissipation @ $T_a=25$	2	
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	$I_C= 50mA ; R_{BE}=\infty$	60			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C= 10 \mu A ; I_E= 0$	70			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E= 10 \mu A ; I_C= 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 2A ; I_B= 0.2A$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 2A ; I_B= 0.2A$			1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 1A ; V_{CE}= 4V$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 60V ; I_E= 0$			10	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 60V ; R_{BE}=\infty$			10	μA
h_{FE-1}	DC Current Gain	$I_C= 1A ; V_{CE}= 4V$	60		200	
h_{FE-2}	DC Current Gain	$I_C= 0.1A ; V_{CE}= 4V$	35			

◆ h_{FE-1} classifications

B	C
60-120	100-200