

SPTECH Silicon NPN Power Transistor

2SC4111

DESCRIPTION

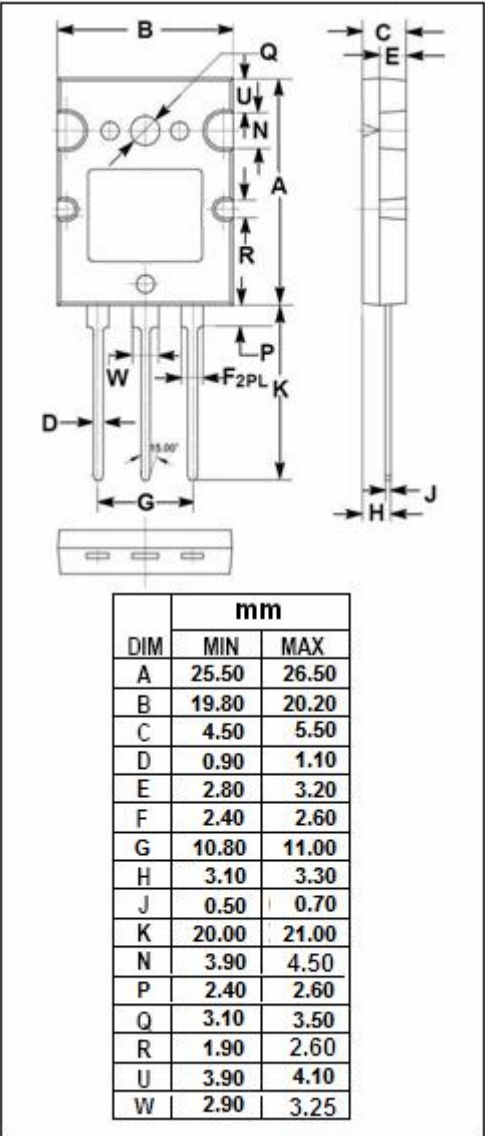
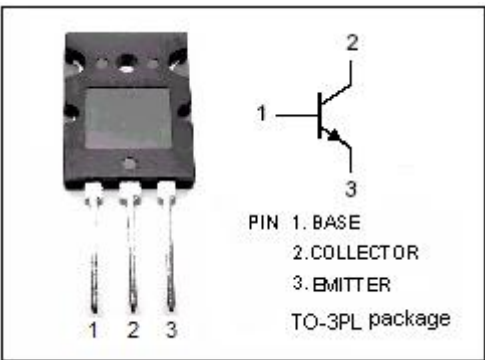
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 800V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Designed for horizontal output applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CES}	Collector-Emitter Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Pulse	22	A
I_B	Base Current-Continuous	3.5	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	150	W
	Collector Power Dissipation @ $T_a=25^{\circ}\text{C}$	3.5	
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_B=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=7\text{A}; I_B=2.5\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=7\text{A}; I_B=2.5\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=750\text{V}; I_E=0$ $V_{CB}=1500\text{V}; I_E=0$			10 1.0	μA mA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	5			
h_{FE-2}	DC Current Gain	$I_C=7\text{A}; V_{CE}=5\text{V}$	3		8	
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		2		MHz

Switching times

t_{stg}	Storage Time	$I_C=6\text{A}, I_{B1}=-I_{B2}=1.7\text{A};$ $I_{leak}=5\mu\text{H}$			12	μs
t_f	Fall Time				0.6	μs