

SPTECH Silicon NPN Power Transistor

2SC3307

DESCRIPTION

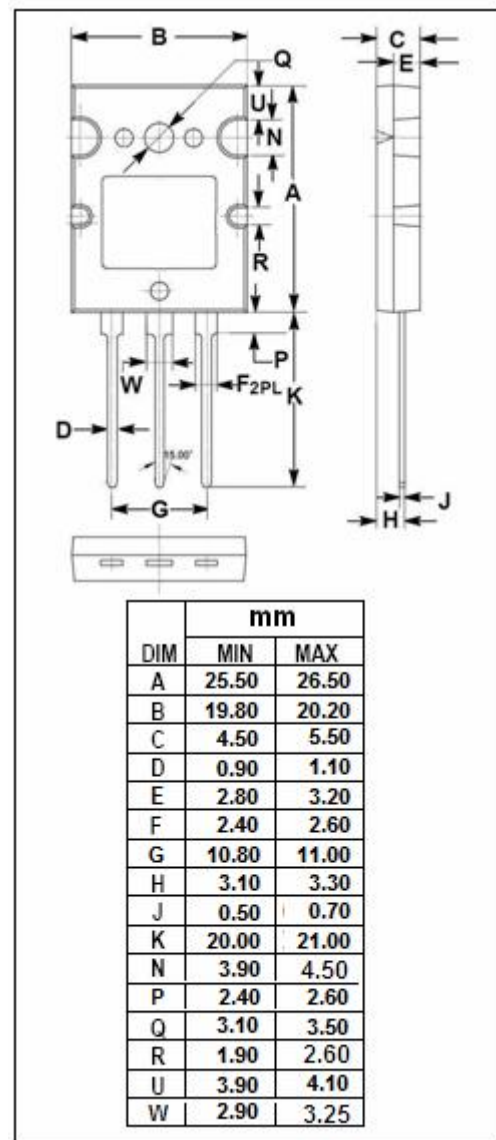
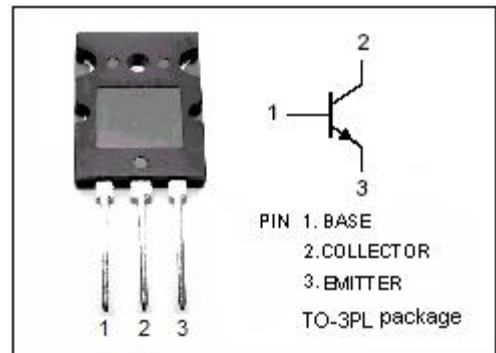
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 800V(\text{Min})$
- High Switching Speed

APPLICATIONS

- High speed and high voltage switching applications.
- Switching regulator applications.
- High speed DC-DC converter applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	900	V
V_{CEO}	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Pulse	15	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	W
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
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}$; $I_B=0$	800			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}$; $I_E=0$	900			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}$; $I_B=1\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}$; $I_B=1\text{A}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=800\text{V}$; $I_E=0$			100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}$; $I_C=0$			1	mA
h_{FE-1}	DC Current Gain	$I_C=10\text{mA}$; $V_{CE}=5\text{V}$	10			
h_{FE-2}	DC Current Gain	$I_C=5\text{A}$; $V_{CE}=5\text{V}$	10			

Switching times

t_r	Rise Time	$I_C=1\text{A}$, $I_{B1}=-I_{B2}=0.4\text{A}$ $R_L=400\Omega$; $V_{CC}\approx 400\text{V}$ $P_W=20\mu\text{s}$; Duty Cycle $\leq 1\%$			1.0	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				1.0	μs