

SPTECH Silicon NPN Power Transistor

2SC2333

DESCRIPTION

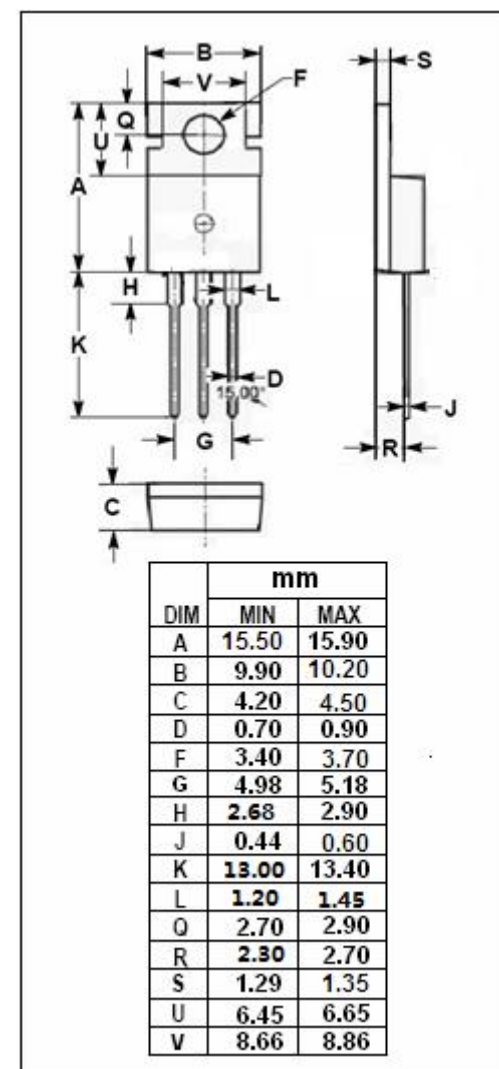
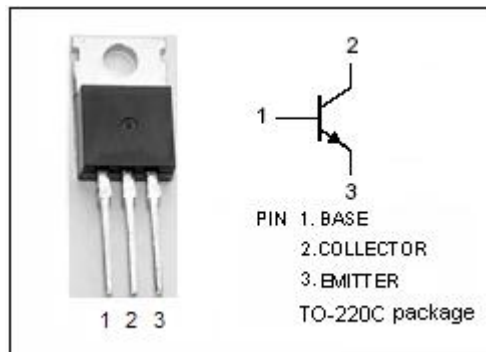
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min})$
- High Speed Switching
- Low Collector Saturation Voltage
- Wide Area of Safe Operation

APPLICATIONS

- Designed for switching regulator, DC-DC converter and ultrasonic appliance applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	4	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	15	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
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=0.1\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=0.5\text{A}; I_B=0.1\text{A}$			1.2	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=400\text{V}; I_E=0$			10	μA
I_{CEX}	Collector Cutoff Current	$V_{CE}=400\text{V}; V_{BE(off)}=-5\text{V}$ $V_{CE}=400\text{V}; V_{BE(off)}=-5\text{V}; T_a=125^{\circ}\text{C}$			10 1.0	μA mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			10	μA
h_{FE-1}	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=5\text{V}$	20		80	
h_{FE-2}	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	10			

Switching Times

t_{on}	Turn-on Time	$I_C=0.5\text{A}, R_L=300\Omega,$ $I_{B1}=-I_{B2}=0.1\text{A}, V_{CC}\approx 150\text{V}$			1.0	μs
t_{stg}	Storage Time				2.5	μs
t_f	Fall Time				1.0	μs

◆ h_{FE-1} Classifications

M	L	K
20-40	30-60	40-80