

isc Silicon NPN Power Transistor

2SC2768

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 200V(\text{Min})$
- High Switching Speed
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

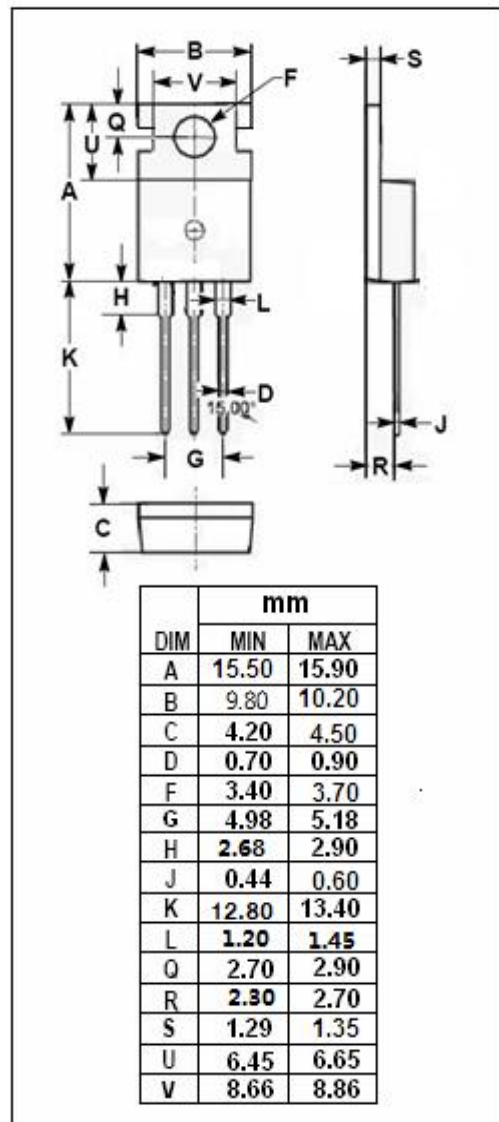
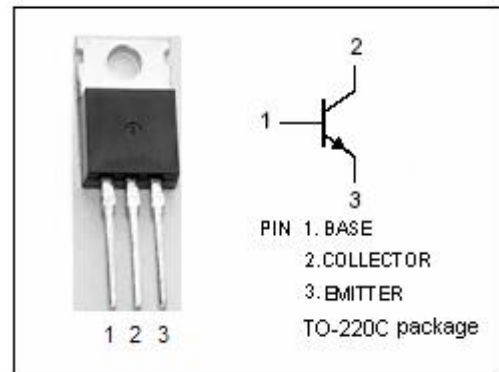
- Switching regulators
- Ultrasonic generators
- High frequency inverters
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	200	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	3.0	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 25mA; I _B = 0	200			V
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 1A; I _B = 0	200			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 0.1mA; I _E = 0	250			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 0.1mA; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.8A			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 0.8A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 250V; I _E =0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C =0			0.1	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 5V	20			

Switching times

t _{on}	Turn-on Time	I _C = 4A , I _{B1} = -I _{B2} = 0.4A R _L = 20 Ω ;P _W =20 μ s Duty Cycle ≤2%			1.0	μ s
t _{stg}	Storage Time				2.0	μ s
t _f	Fall Time				1.0	μ s

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