

isc Silicon NPN Power Transistor
BUL52A
DESCRIPTION

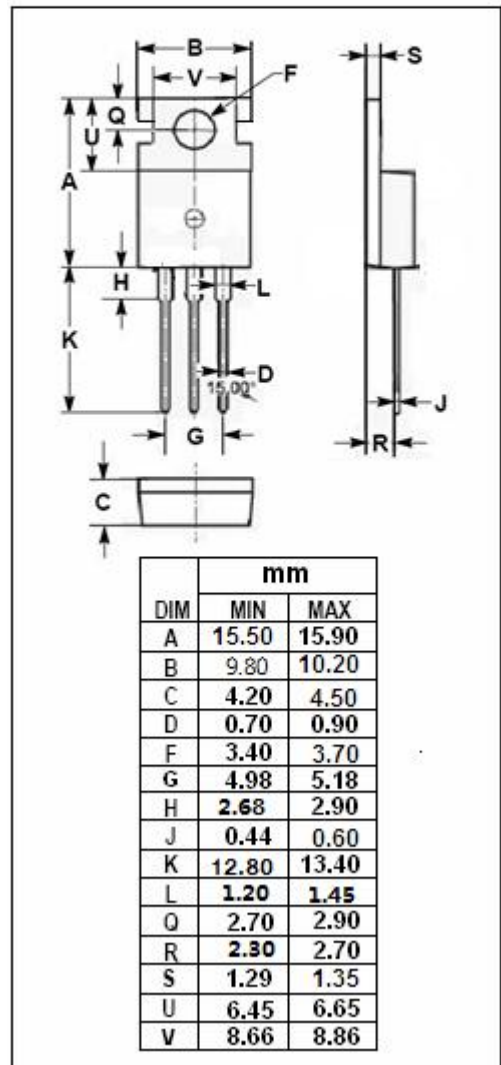
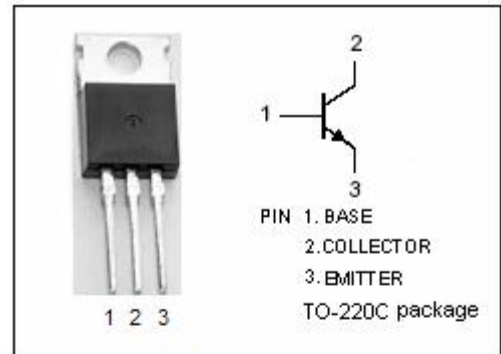
- Collector–Emitter Sustaining Voltage
: $V_{CE(SUS)} = 500V(\text{Min.})$
- Collector Saturation Voltage
: $V_{CE(sat)} = 0.1V(\text{Max}) @ I_C = 0.1A$
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in lighting applications and low cost switch-mode power supplies.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1000	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-peak	10	A
I_B	Base Current-Continuous	2.5	A
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	100	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°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 10mA; I _B = 0	500			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	1000			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	10			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 0.1A; I _B = 20mA			0.1	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 0.5A			0.2	V
V _{CE(sat)-3}	Collector-Emitter Saturation Voltage	I _C = 2.5A; I _B = 0.5A			0.8	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 0.2A			1.0	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 2.5A; I _B = 0.5A			1.2	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 500V; I _B = 0			100	μ A
I _{CBO}	Collector Cutoff Current	V _{CB} = 1000V; I _E = 0 V _{CB} = 1000V; I _E = 0, T _C = 125°C			10 100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 9V; I _C = 0 V _{EB} = 9V; I _C = 0, T _C = 125°C			10 100	μ A
h _{FE-1}	DC Current Gain	I _C = 0.1A; V _{CE} = 5V	18			
h _{FE-2}	DC Current Gain	I _C = 1A; V _{CE} = 5V	12			
h _{FE-3}	DC Current Gain	I _C = 2.5A; V _{CE} = 1V	5			

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