

isc Silicon PNP Power Transistor
2SB983
DESCRIPTION

- High Switching Time
- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V(\text{Max}) @ I_C = -4A$
- Wide Area of Safe Operation
- Complement to Type 2SD1345
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

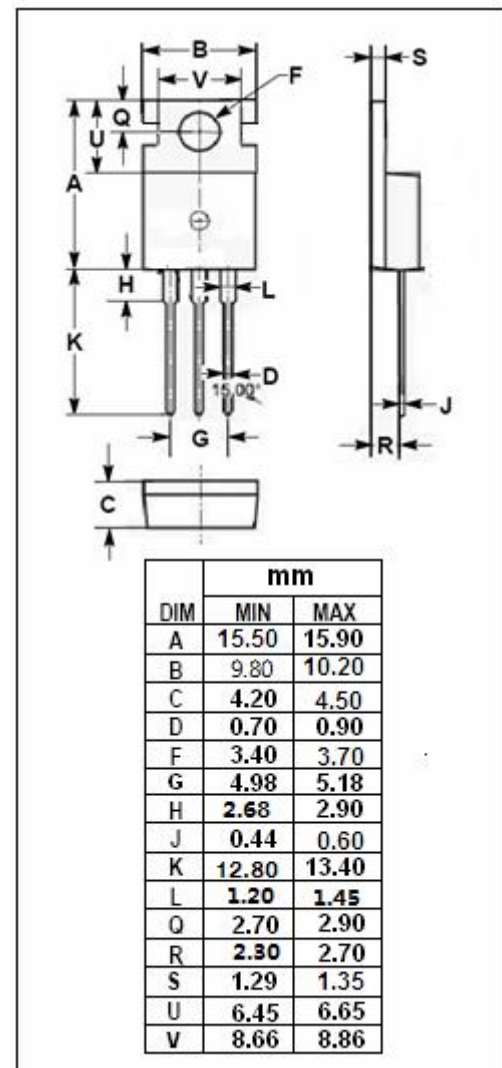
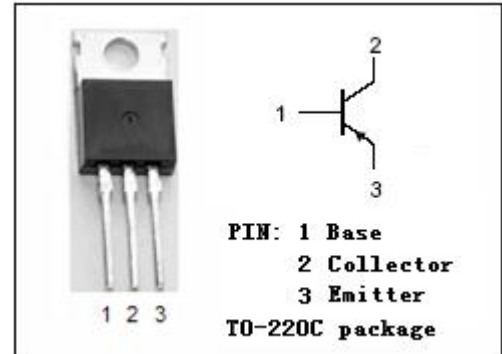
- Inverters, converters
- Controllers for DC motor, pulse motor
- Switching power supplies
- General power applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current-Continuous	-7	A
I_{CM}	Collector Current-Peak	-12	A
I_B	Base Current-Continuous	-1.5	A
I_{BM}	Base Current-Peak	-4	A
P_C	Total 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_{th-j-c}	Thermal Resistance, Junction to Case	3.1	$^\circ\text{C/W}$



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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 = -1mA; I _B = 0	-50			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -4A; I _B = -0.4A			-0.4	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -4A; I _B = -0.4A			-1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -40V; I _E = 0			-0.1	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = -40V; I _B = 0			-0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -4V; I _C = 0			-0.1	mA
h _{FE}	DC Current Gain	I _C = -1A; V _{CE} = -2V	70		200	

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