

isc Silicon PNP Power Transistor

2SA1645

DESCRIPTION

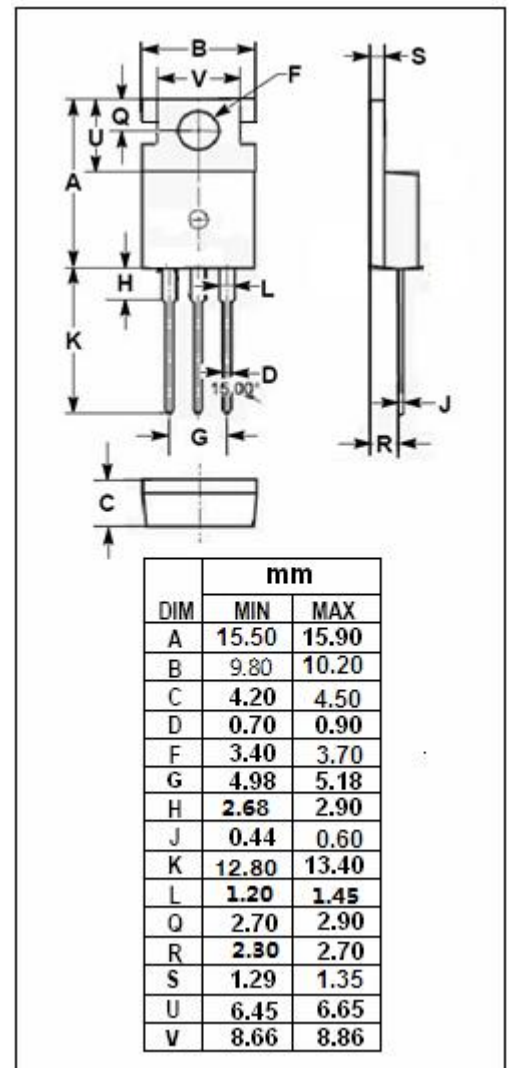
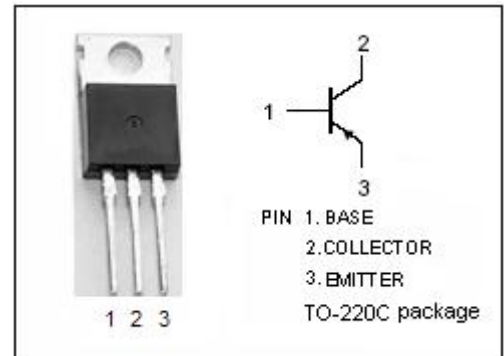
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -100V(\text{Min})$
- High DC Current Gain-
: $h_{FE} = 100(\text{Min})@ (V_{CE} = -2V, I_C = -1A)$
- Low Saturation Voltage-
: $V_{CE(sat)} = -0.3V(\text{Max})@ (I_C = -4A, I_B = -0.2A)$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Developed for use in switching power supplies, DC/DC converters, motor drivers, solenoid drivers, and other low-voltage power supply devices, as well as for high-current switching.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-150	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-7.0	V
I_C	Collector Current-Continuous	-7.0	A
I_{CM}	Collector Current-Peak	-14	A
I_B	Base Current-Continuous	-3.5	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	35	
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	MAX	UNIT
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = -4A; I _B = -0.2A		-0.3	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = -6A; I _B = -0.3A		-0.5	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = -4A; I _B = -0.2A		-1.2	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = -6A; I _B = -0.3A		-1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -100V; I _E =0		-10	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C =0		-10	μA
h _{FE-1}	DC Current Gain	I _C = -0.5A; V _{CE} = -2V	100		
h _{FE-2}	DC Current Gain	I _C = -1.5A; V _{CE} = -2V	100	400	
h _{FE-3}	DC Current Gain	I _C = -4A; V _{CE} = -2V	60		

◆ h_{FE-2} Classifications

M	L	K
100-200	150-300	200-400

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