

isc Silicon NPN Power Transistor

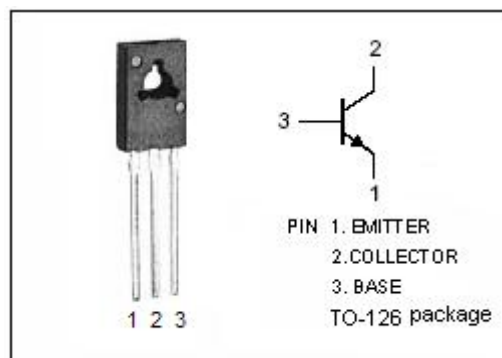
2SD1804

DESCRIPTION

- Excellent linearity of h_{FE}
- Low Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50\text{ V}$
- Fast switching time
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

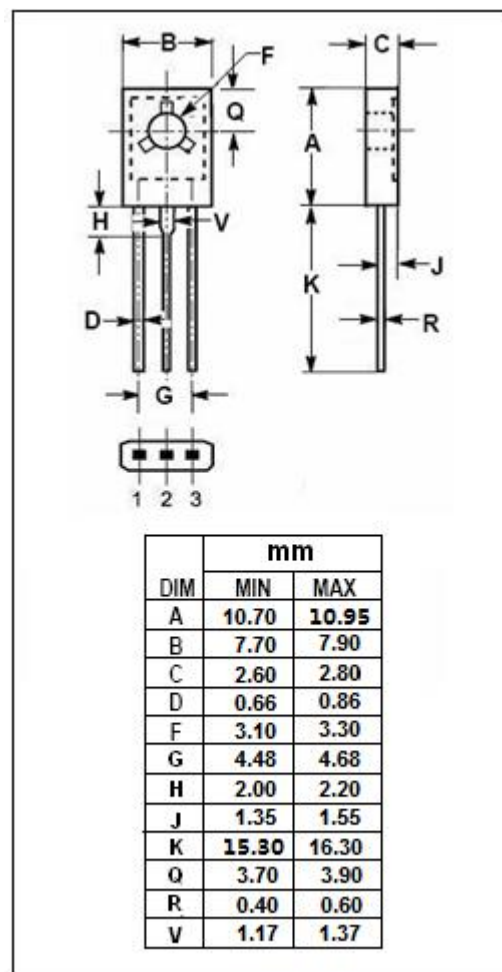
APPLICATIONS

- Relay drivers, high-speed inverters , converters and Other general high current switching 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	8	A
P_C	Collector Power Dissipation	1	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	20	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD1804****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C =4A; I _B =0.2A		200	400	mV
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 0.2A		0.95	1.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V; I _E = 0			1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C =0			1.0	μ A
h _{FE-1}	DC Current Gain	I _C = 0.5A ; V _{CE} = 2V	70		400	
h _{FE-2}	DC Current Gain	I _C = 6A ; V _{CE} = 2V	35			
f _T	Current-Gain—Bandwidth Product	I _C = 1A ; V _{CE} = 5V		180		MHz

◆ h_{FE-2} Classifications

Q	R	S	T
70-140	100-200	140-280	200-400

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