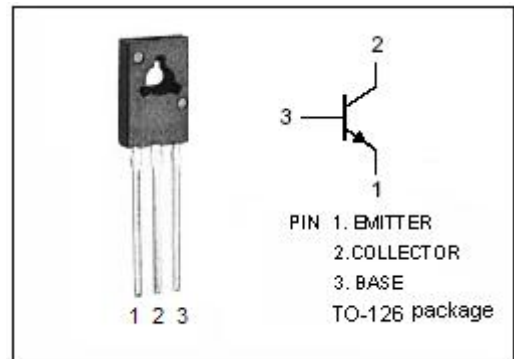


isc Silicon NPN Power Transistor
2SD1804
DESCRIPTION

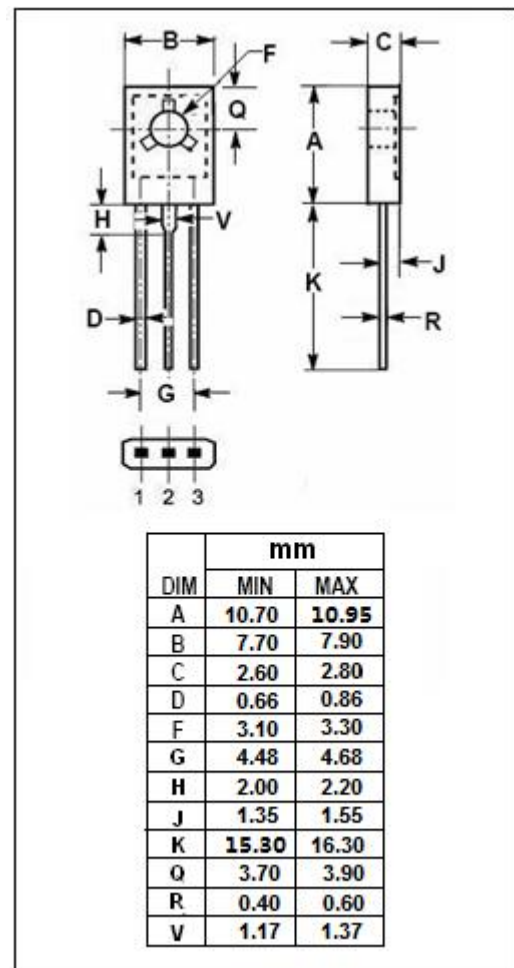
- Excellent linearity of h_{FE}
- Low Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50\text{ V}$
- Fast switching time
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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
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ELECTRICAL CHARACTERISTICS
 $T_c=25^{\circ}\text{C}$ 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	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=4V; I_C=0$			1.0	μA
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

NOTICE:

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