

Silicon NPN Power Transistor

2SD1804-T

FEATURES

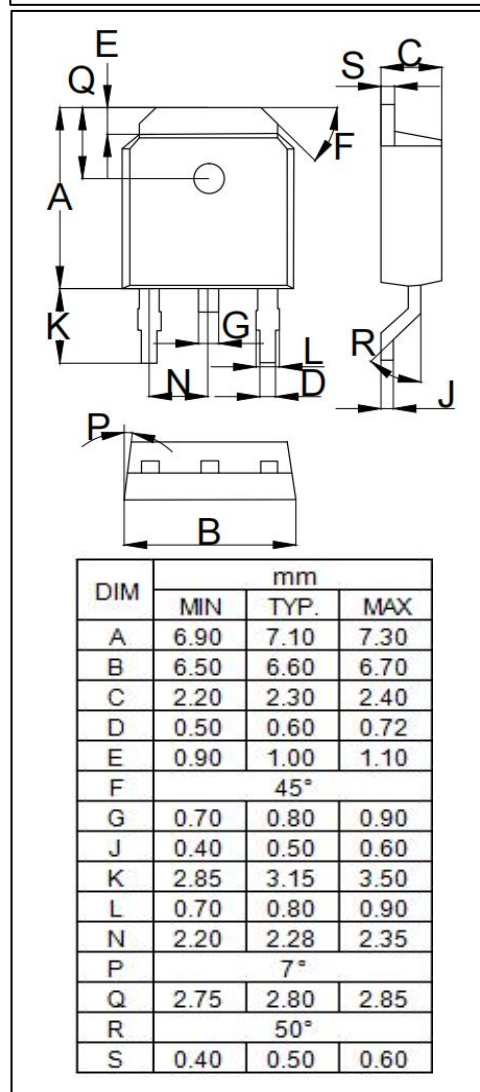
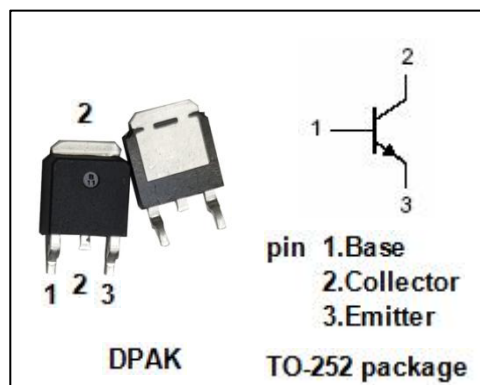
- Excellent linearity of h_{FE}
- Low collector-to-emitter saturation voltage
- Fast switching speed

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
I_{CP}	Collector Current-Pulse	12	A
P_C	Collector Power Dissipation @ $T_a=25^{\circ}\text{C}$	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	$^{\circ}\text{C}$



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ELECTRICAL CHARACTERISTICS (T_C=25°C unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
BV _{CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA; I _E =0	60			V
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C =1mA; R _{BE} =∞	50			V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E =0.1mA; I _C =0	6			V
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} = 5V; 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			

◆ h_{FE-1} Classifications

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

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