isc Silicon NPN Power Transistor — 2SD1804L-T

DESCRIPTION

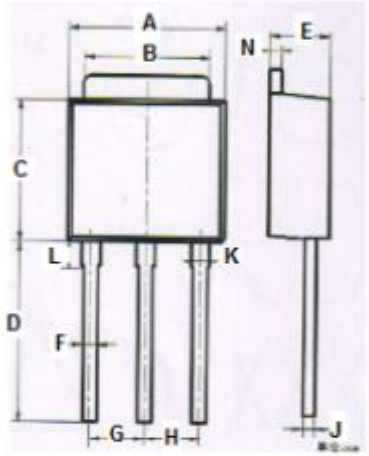
- Excellent linearity of h_{FE}
- Low Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 50 V
- Fast switching time
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

PIN : 1 Base
2 Collector
3 Emitter
4 Collector (fin)

IPAK — TO-251 Package

APPLICATIONS

- Relay drivers, high-speed inverters , converters and Other general high current switching applications



DIM	mm MIN	mm MAX
A	6.40	6.48
B	5.10	5.50
C	5.80	6.20
D	9.20	9.60
E	2.20	2.40
F	0.50	0.70
G	2.09	2.49
H	2.09	2.49
J	0.40	0.60
K	0.70	0.90
L	1.60	2.00
N	0.40	0.60

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	20	
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C=1mA; R_{BE}=∞	60			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}= 4V; I_C=0			1.0	μA
h_{FE-1}	DC Current Cain	I_C= 0.5A ; V_{CE}= 2V	70		400	
h_{FE-2}	DC Current Cain	I_C= 6A ; V_{CE}= 2V	35			

◆ **h_{FE-2} Classifications**

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