

TO-126 Plastic-Encapsulate Transistors

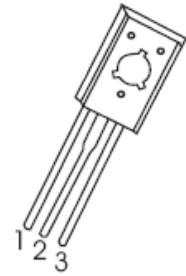
KSD1692 TRANSISTOR (NPN)

FEATURES

- High DC Current Gain
- Low Collector Saturation Voltage
- High Power Dissipation

TO - 126

1. EMITTER
2. COLLECTOR
3. BASE



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current	3	A
P_C	Collector Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	100	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

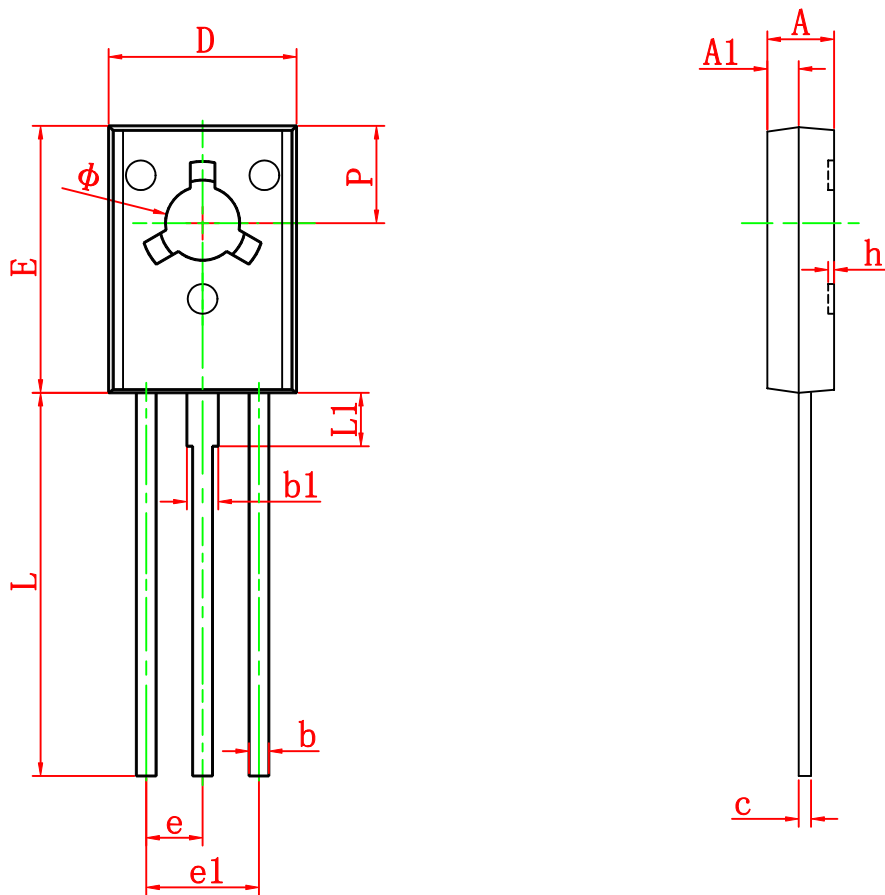
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	150			V
Collector-emitter breakdown voltage	$V_{CEO(SUS)}^*$	$I_C=30\text{mA}, I_B=0$	100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=5\text{mA}, I_C=0$	8			V
Collector cut-off current	I_{CBO}	$V_{CB}=100\text{V}, I_E=0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			2	mA
DC current gain	$h_{FE(1)}^*$	$V_{CE}=2\text{V}, I_C=1.5\text{A}$	2K		20K	
	$h_{FE(2)}^*$	$V_{CE}=2\text{V}, I_C=3\text{A}$	1K			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=1.5\text{A}, I_B=1.5\text{mA}$			1.2	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=1.5\text{A}, I_B=1.5\text{mA}$			2	V

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycles $\leq 1.5\%$.

CLASSIFICATION OF $h_{FE(1)}$

RANK	O	Y	G
RANGE	2K-5K	4K-12K	6K-20K

TO-126 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
Φ	3.000	3.200	0.118	0.126