

isc Silicon NPN Darlington Power Transistor

2SD1692

DESCRIPTION

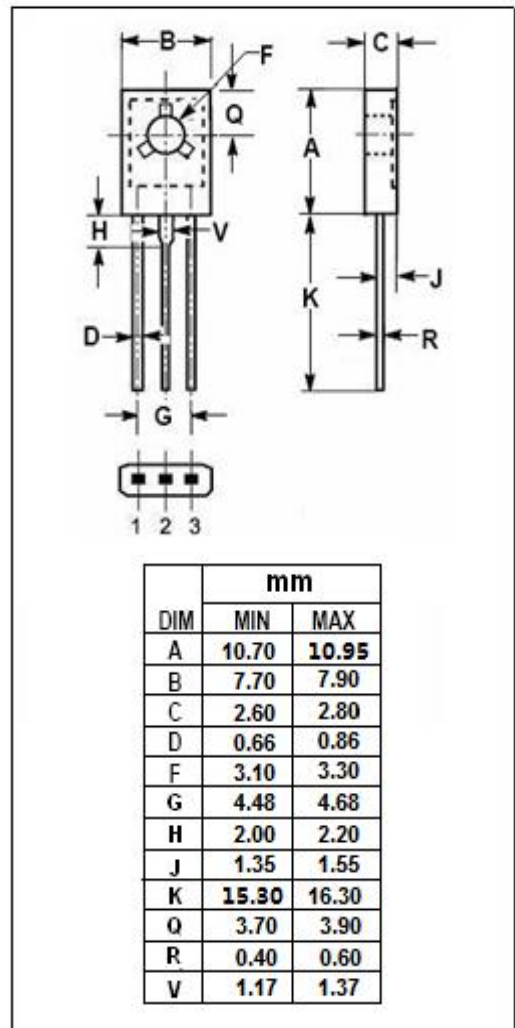
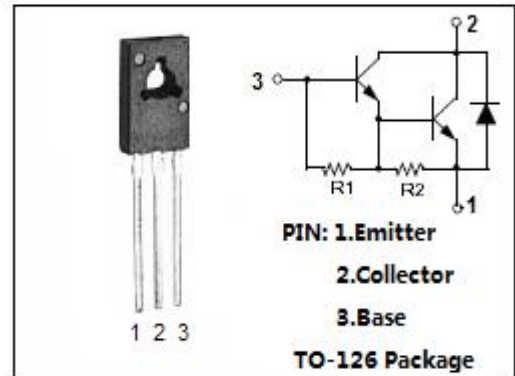
- Collector–Emitter Sustaining Voltage—
: $V_{CEO(SUS)} = 100V(\text{min.})$
- DC Current Gain—
: $h_{FE} = 2000(\text{Min.}) @ I_C = 1.5 A$
- Complement to Type 2SB1149
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for general-purpose amplifier applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

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-Continuous	3	A
I_{CM}	Collector Current-Peak	5	A
P_C	Collector Power Dissipation $T_a=25^\circ\text{C}$	1.3	W
	Collector Power Dissipation $T_c=25^\circ\text{C}$	15	
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
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 30mA; I _B = 3mA, L= 1.0mH	100			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1.5A; I _B = 1.5mA			1.2	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1.5A; I _B = 1.5mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 100V; I _E = 0			10	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 100V; R _{BE} = ∞			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 1.5 A; V _{CE} = 2V	2000		20000	
h _{FE-2}	DC Current Gain	I _C = 3 A; V _{CE} = 2V	1000			

Switching Times

t _{on}	Turn-on Time	I _C = 1.5A, I _{B1} = I _{B2} = 1.5mA; R _L = 27 Ω; V _{CC} ≈ 40V		0.5		μ s
t _{stg}	Storage Time			2.0		μ s
t _f	Fall Time			1.0		μ s

◆ h_{FE-1} Classifications

M	L	K
2000-5000	4000-12000	8000-20000

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