

ISC Silicon NPN Darlington Power Transistor

2SD1692

DESCRIPTION

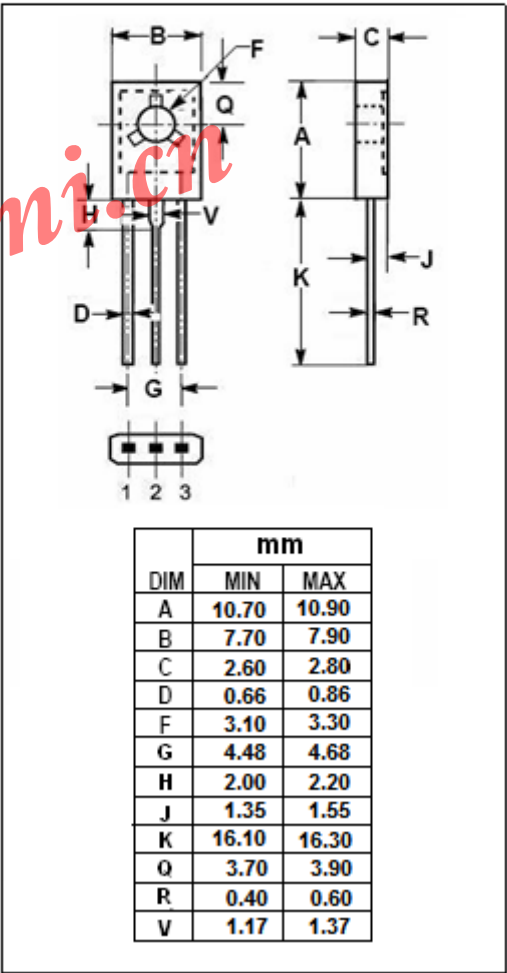
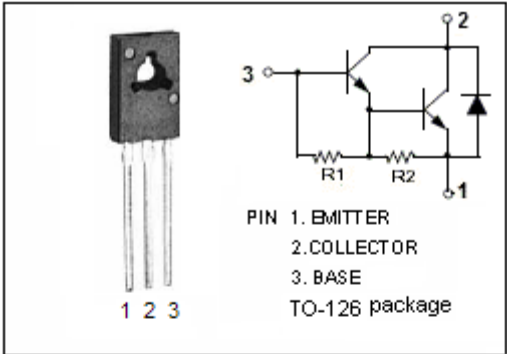
- Collector–Emitter Sustaining Voltage—
: $V_{CEO(SUS)} = 100V(min.)$
- DC Current Gain—
: $h_{FE} = 2000(Min.) @ I_C = 1.5 A$
- Complement to Type 2SB1149

APPLICATIONS

- Designed for general-purpose amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emittter 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 $T_a=25^{\circ}C$	1.3	W
	Collector Power Dissipation $T_c=25^{\circ}C$	15	
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=3\text{A}; I_B=3\text{mA}, L=1.0\text{mH}$	100			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1.5\text{A}; I_B=1.5\text{mA}$			1.2	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=1.5\text{A}; I_B=1.5\text{mA}$			2.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=100\text{V}; I_E=0$			10	μA
I_{CEO}	Collector Cutoff Current	$V_{CE}=100\text{V}; R_{BE}=\infty$			1.0	mA
h_{FE-1}	DC Current Gain	$I_C=1.5\text{A}; V_{CE}=2\text{V}$	2000		20000	
h_{FE-2}	DC Current Gain	$I_C=3\text{A}; V_{CE}=2\text{V}$	1000			

Switching Times

t_{on}	Turn-on Time	$I_C=1.5\text{A}, I_{B1}=-I_{B2}=1.5\text{mA};$ $R_L=27\Omega; V_{CC}\approx 40\text{V}$		0.5		μs
t_{stg}	Storage Time			2.0		μs
t_f	Fall Time			1.0		μs

◆ h_{FE-1} Classifications

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