

isc Silicon NPN Darlington Power Transistor

2SD1692

DESCRIPTION

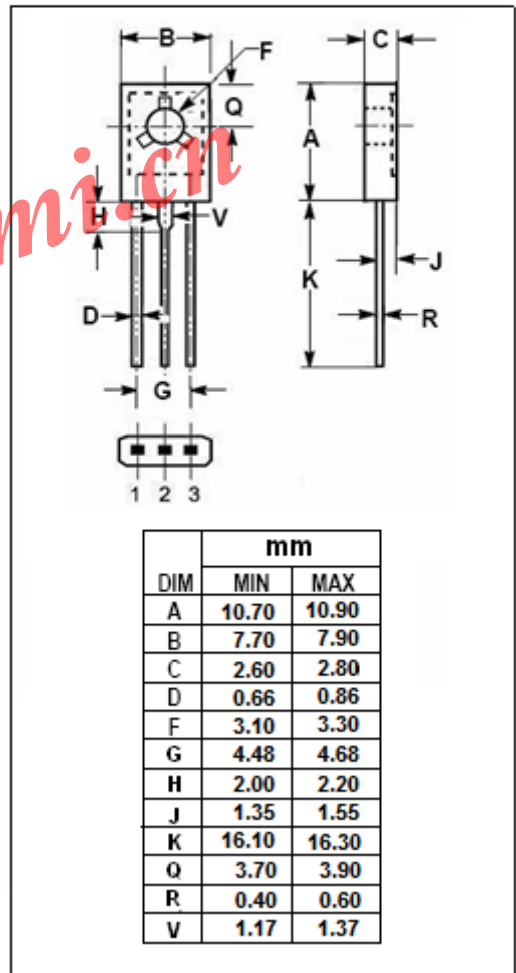
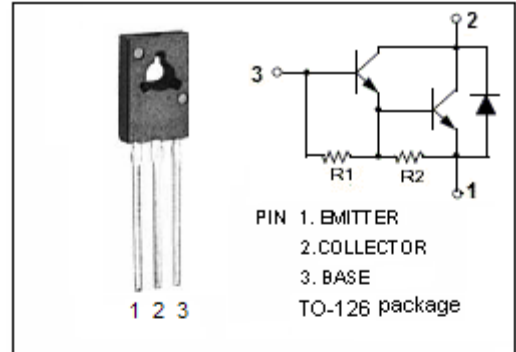
- Collector–Emitter Sustaining Voltage—  
:  $V_{CEO(SUS)} = 100V(\text{min.})$
- DC Current Gain—  
:  $h_{FE} = 2000(\text{Min.}) @ I_C = 1.5 A$
- Complement to Type 2SB1149

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-Emmitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	8	V
$I_C$	Collector Current-Continuous	$\pm 3$	A
$I_{CM}$	Collector Current-Peak	$\pm 5$	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	$\mu\text{A}$
$I_{CEO}$	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		$\mu\text{s}$
$t_{stg}$	Storage Time			2.0		$\mu\text{s}$
$t_f$	Fall Time			1.0		$\mu\text{s}$

◆  $h_{FE-1}$  Classifications

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