

isc Silicon NPN Darlington Power Transistor
2SD1162
DESCRIPTION

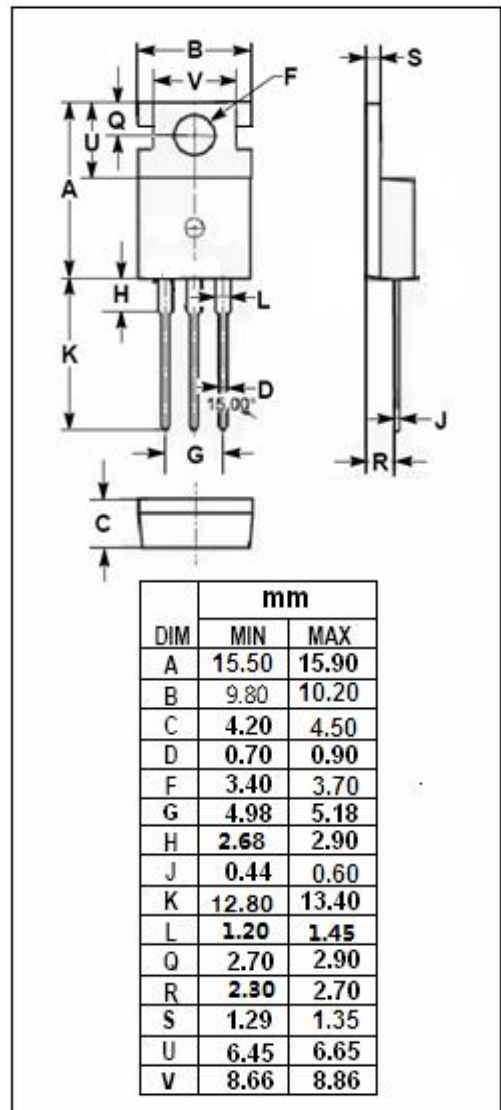
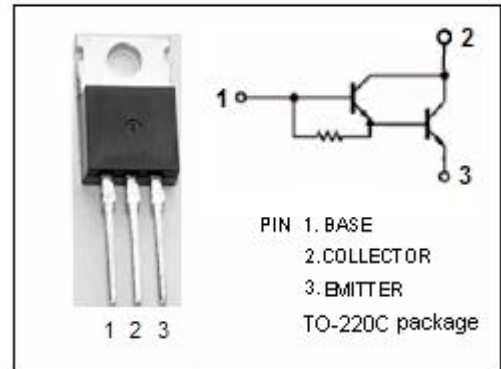
- High DC Current Gain-
: $h_{FE} = 400(\text{Min.}) @ I_C = 2A$
- High Switching Speed
- Low Collector Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high voltage, low speed switching industrial use.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Base Current-Peak	10	A
I_B	Base Current-Continuous	0.5	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	40	W
	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	
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 _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	300			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 5mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 5mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 400V; I _E = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 2A ; V _{CE} = 2V	400		3000	
h _{FE-2}	DC Current Gain	I _C = 3A ; V _{CE} = 2V	100			

Switching Times

t _{on}	Turn-On Time			1.0		μ s
t _s	Storage Time	I _C = 3A; I _{B1} = I _{B2} = 30mA; R _L = 50 Ω, V _{CC} ≈ 150V		12		μ s
t _f	Fall Time			6		μ s

◆ h_{FE-1} Classifications

M	L	K
400-800	600-1200	1000-3000

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