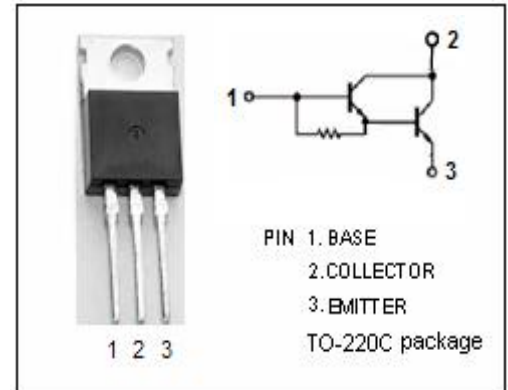


isc Silicon NPN Darlington Power Transistor
2SD1088
DESCRIPTION

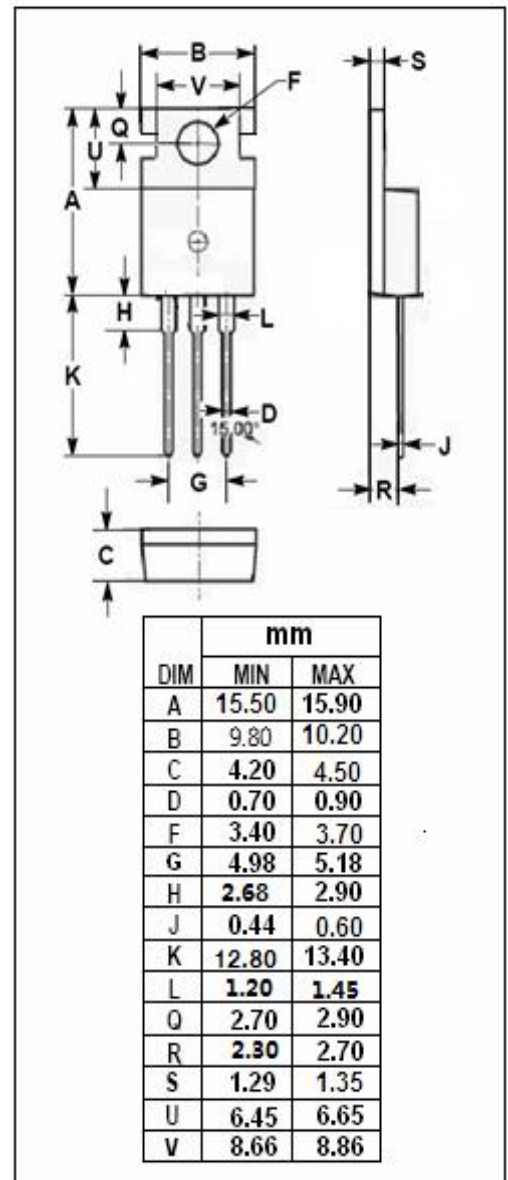
- Collector-Emitter Sustaining Voltage-
: $V_{CE(SUS)} = 250V(\text{Min})$
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min.}) @ I_C = 2A$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 2.0V(\text{Max}) @ I_C = 4A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


APPLICATIONS

- Designed for use in high-voltage switching igniter applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	250	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	1.0	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	30	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$


THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	4.16	$^\circ\text{C/W}$

isc Silicon NPN Darlington Power Transistor
2SD1088
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 = 50mA; I _B = 0	250			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 40mA			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 40mA			2.5	V
I _{CBO}	Collector Cutoff Current	V _{CE} = 300V; I _E = 0			500	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			500	μ A
h _{FE-1}	DC Current Gain	I _C = 2A; V _{CE} = 2V	2000			
h _{FE-2}	DC Current Gain	I _C = 4A; V _{CE} = 2V	200			

Switching Times

t _{on}	Turn-On Time	I _C = 4A; I _{B1} = I _{B2} = 40mA; R _L = 25 Ω, V _{CC} =100V		1.0		μ s
t _s	Storage Time			8.0		μ s
t _f	Fall Time			5.0		μ s

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