

isc Silicon NPN Darlington Power Transistor
2SD768
DESCRIPTION

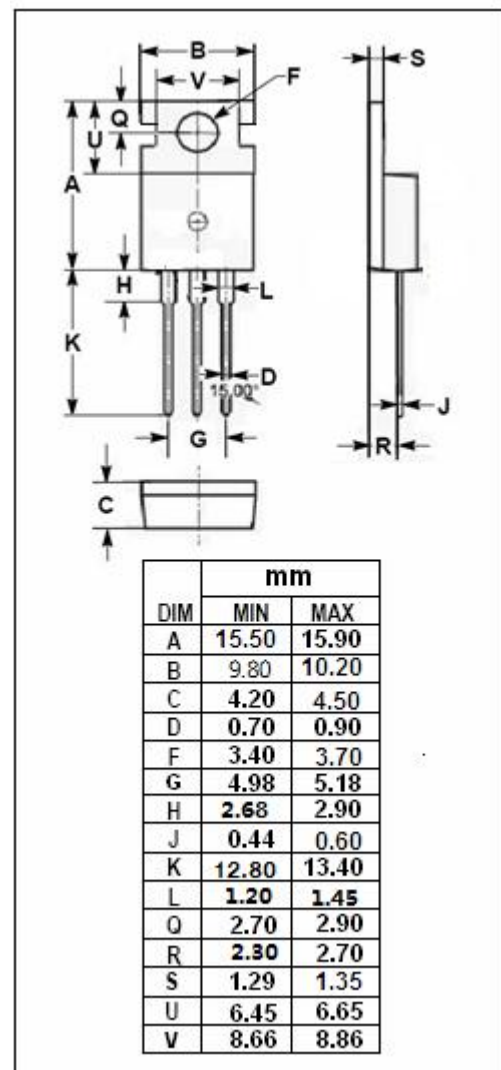
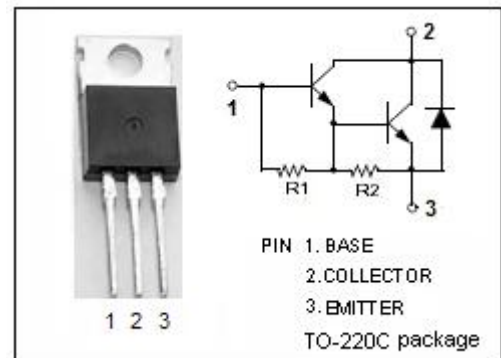
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 3A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 1.5V(\text{Max}) @ I_C = 3A$
- Complement to Type 2SB727
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Medium speed and power switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
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 = 25mA, R _{BE} = ∞	120			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50mA, I _C = 0	7			V
V _{CE(sat)-1★}	Collector-Emitter Saturation Voltage	I _C = 3A, I _B = 6mA			1.5	V
V _{CE(sat)-2★}	Collector-Emitter Saturation Voltage	I _C = 6A, I _B = 60mA			3.0	V
V _{BE(sat)-1★}	Base-Emitter Saturation Voltage	I _C = 3A, I _B = 6mA			2.0	V
V _{BE(sat)-2★}	Base-Emitter Saturation Voltage	I _C = 6A, I _B = 60mA			3.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V, I _E = 0			100	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 100V; R _{BE} = ∞			10	μ A
h _{FE★}	DC Current Gain	I _C = 3A; V _{CE} = 3V	1000		20000	

★:Pulse Test

Switching Times

t _{on}	Turn-On Time	I _C = 3A, I _{B1} = I _{B2} = 6mA;		1.0		μ s
t _f	Fall Time			3.0		μ s

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