

isc Silicon NPN Darlington Power Transistor

2SD864

DESCRIPTION

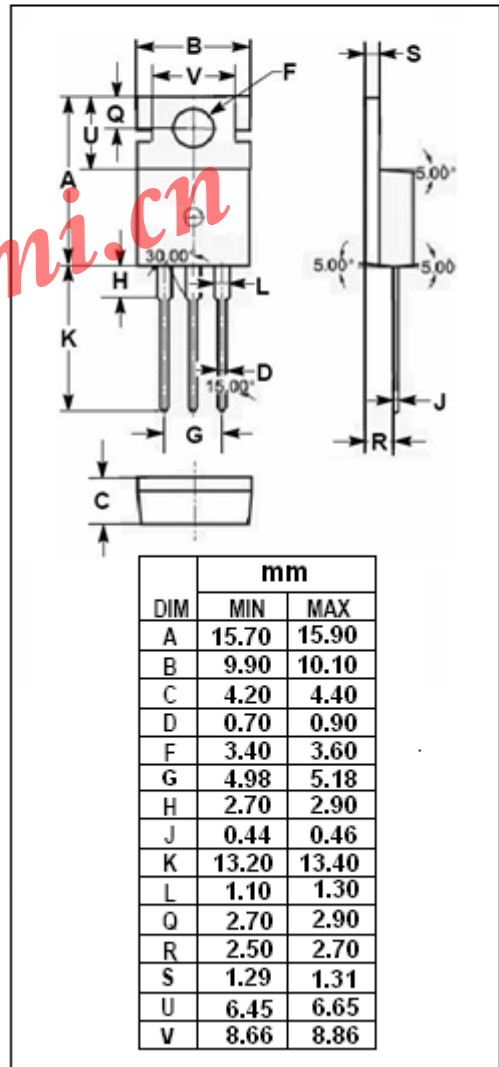
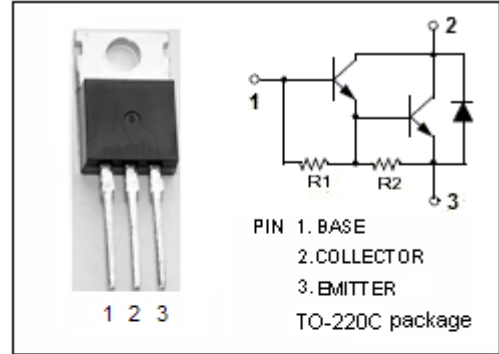
- High DC Current Gain-
: $h_{FE} = 1000(\text{Min}) @ I_C = 1.5\text{A}$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120\text{V}(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(\text{sat})} = 1.5\text{V}(\text{Max}) @ I_C = 1.5\text{A}$
- Complement to Type 2SB765

APPLICATIONS

- Medium speed and power switching applications.

ABSOLUTE MAXIMUM RATINGS (Ta=25°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	3	A
I _{CM}	Collector Current-Peak	6	A
P _C	Collector Power Dissipation T _C =25°C	30	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°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 = 1.5A, I _B = -3mA			1.5	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 3A, I _B = -30mA			3.0	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 1.5A, I _B = -3mA			2.0	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 3A, I _B = -30mA			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 = 1.5A; V _{CE} = 3V	1000		20000	

Switching times

t _{on}	Turn-on Time	I _C = 1.5A; I _{B1} = -I _{B2} = 3mA		0.5		μ s
t _{stg}	Storage Time			4.5		μ s
t _f	Fall Time			1.1		μ s