

isc Silicon NPN Darlington Power Transistor
2SD985
DESCRIPTION

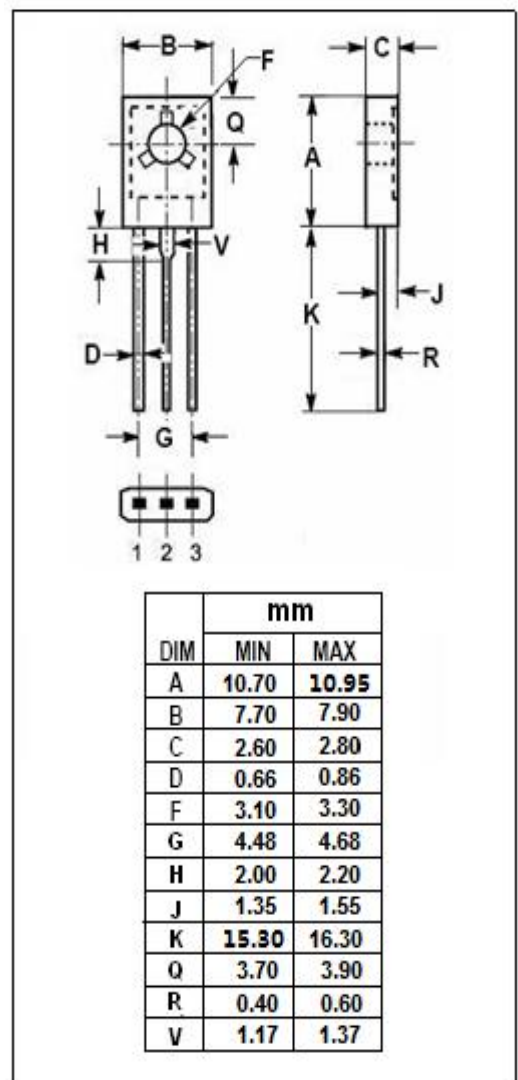
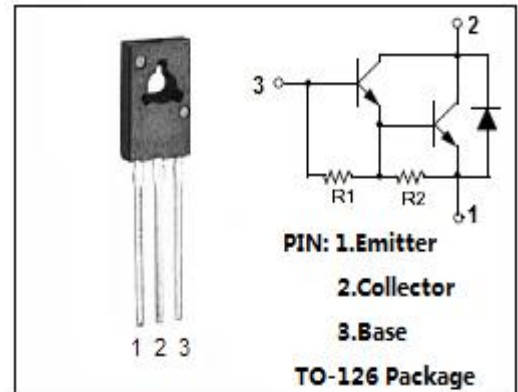
- Collector–Emitter Breakdown Voltage–
: $V_{(BR)CEO} = 60V(\text{Min.})$
- DC Current Gain–
: $h_{FE} = 2000(\text{Min}) @ I_C = 1A$
- Low Collector Saturation Voltage
- Complement to Type 2SB794
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- They are suitable for use to operate from IC without predriver, such as hammer driver.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Pulse	3.0	A
I_B	Base Current	0.15	A
P_C	Collector Power Dissipation $T_a=25^\circ\text{C}$	1.0	W
	Collector Power Dissipation $T_C=25^\circ\text{C}$	10	
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 _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1A; I _B = 1mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1A; I _B = 1mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 60V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 0.5A; V _{CE} = 2V	1000			
h _{FE-2}	DC Current Gain	I _C = 1A; V _{CE} = 2V	2000		30000	

Switching Times

t _{on}	Turn-on Time			0.5		μ s
t _{stg}	Storage Time	I _C =1.0A; I _{B1} =I _{B2} =1.0mA V _{CC} =50V; R _L =50 Ω		1.0		μ s
t _f	Fall Time			1.0		μ s

◆ h_{FE-2} Classifications

M	L	K
2000-5000	4000-10000	8000-30000

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