

isc Silicon NPN Darlington Power Transistor

2SD1640

DESCRIPTION

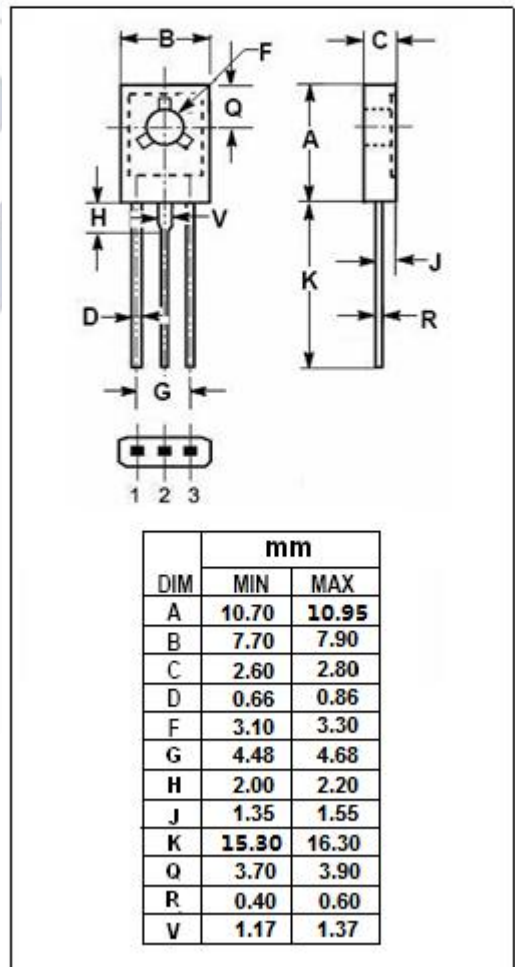
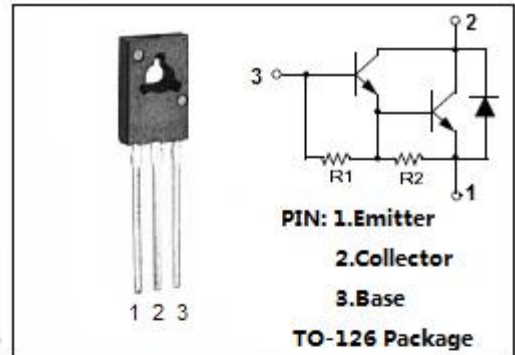
- Collector–Emitter Breakdown Voltage—
: $V_{(BR)CEO} = 100V(\text{Min})$
- DC Current Gain—
: $h_{FE} = 4000(\text{Min}) @ I_C = 1 A$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use as output devices in complementary general-purpose amplifier 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	100	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	3	A
P_C	Collector Power Dissipation $T_C=25^\circ\text{C}$	20	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor**2SD1640****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	100		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 2mA; I _C = 0	5		V
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 _{CEO}	Collector Cutoff Current	V _{CE} = 100V; I _B = 0		0.1	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V; I _E = 0		0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		2.0	mA
h _{FE}	DC Current Gain	I _C = 1 A ; V _{CE} = 10V	4000	40000	

◆ **h_{FE} Classifications**

Q	R	S
4000-10000	8000-20000	16000-40000