

isc Silicon NPN Darlington Power Transistor

2SD1640

DESCRIPTION

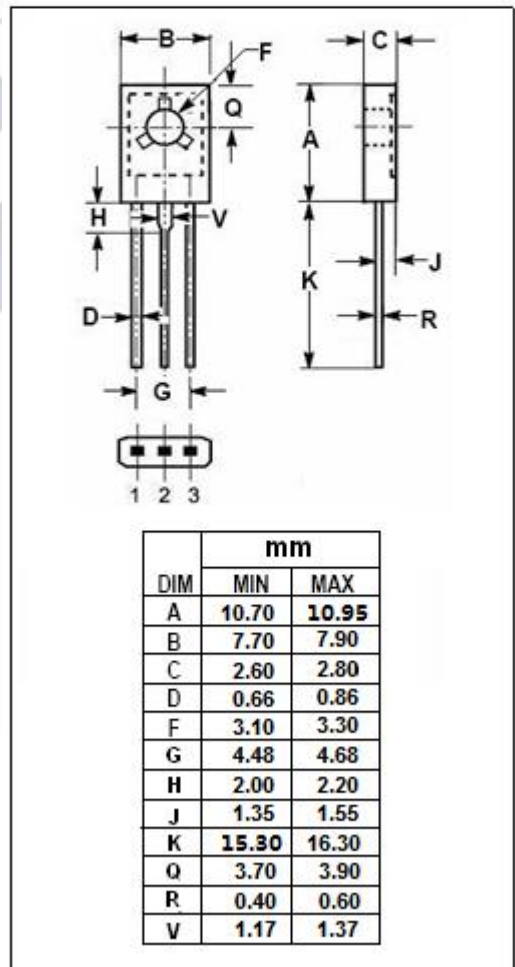
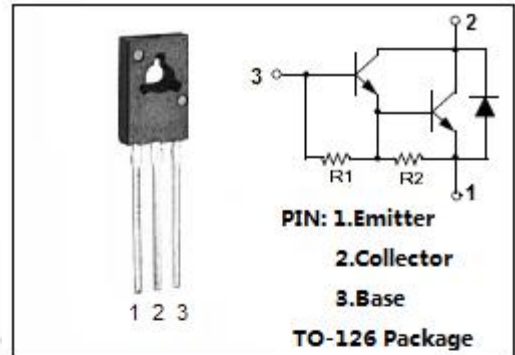
- Collector–Emitter Breakdown Voltage—
: $V_{(BR)CEO} = 100V(\text{Min})$
- DC Current Gain—
: $h_{FE} = 4000(\text{Min}) @ I_C = 1 A$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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** $T_c=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	100		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=2\text{mA}; I_C=0$	5		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=1\text{mA}$		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=1\text{mA}$		2.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=100\text{V}; I_B=0$		0.1	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=120\text{V}; I_E=0$		0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		2.0	mA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=10\text{V}$	4000	40000	

◆ **h_{FE} Classifications**

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