

isc Silicon PNP Darlington Power Transistor
BD678
DESCRIPTION

- Collector–Emitter Breakdown Voltage—
: $V_{(BR)CEO} = -60$
- DC Current Gain—
: $h_{FE} = 750(\text{Min}) @ I_C = -1.5 \text{ A}$
- Complement to Type BD677
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

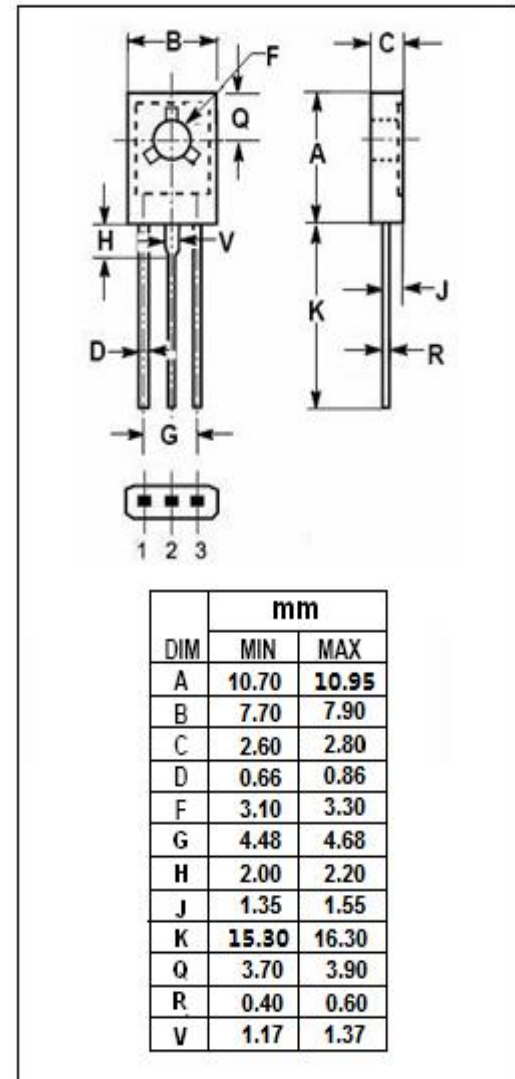
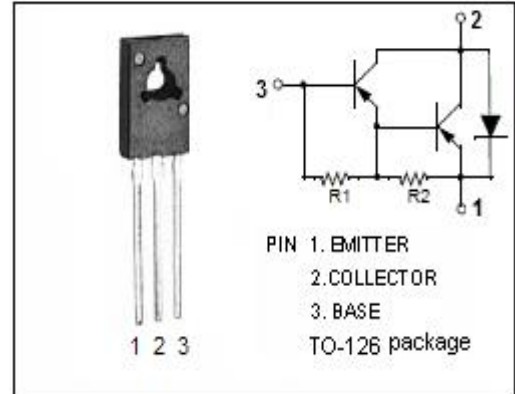
- Designed for use as output devices in complementary general-purpose amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emmitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-4	A
I_B	Base Current	-0.1	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	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.13	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = -50mA; I _B = 0	-60		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1.5A; I _B = -30mA		-2.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = -1.5A; V _{CE} = -3V		-2.5	V
I _{CEO}	Collector Cutoff Current	V _{CE} = -60V; I _B = 0		-0.5	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = -60V; I _E = 0 V _{CB} = -60V; I _E = 0; T _C = 100°C		-0.2 -2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0		-2.0	mA
h _{FE}	DC Current Gain	I _C = -1.5 A ; V _{CE} = -3V	750		

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