



# **isc Silicon PNP Darlington Power Transistor**

### **DESCRIPTION**

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



### **APPLICATIONS**

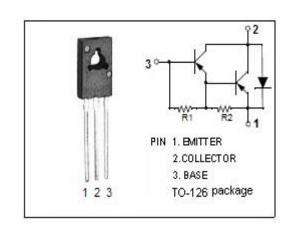
 Designed for use as output devices in complementary general-purpose amplifier applications.

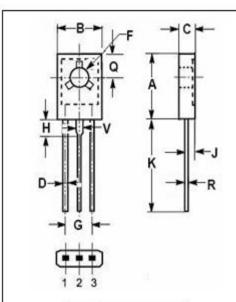
## ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT	
V <sub>CBO</sub>	Collector-Base Voltage	-60	V	
V <sub>CEO</sub>	Collector-Emitter Voltage	-60	V	
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V	
Ic	Collector Current-Continuous	-4	Α	
I <sub>B</sub>	Base Current	-0.1	Α	
Pc	Collector Power Dissipation $T_c$ =25 $^{\circ}$ C	40	W	
Ti	Junction Temperature	150	$^{\circ}$	
T <sub>stg</sub>	Storage Temperature Range	-55~150	$^{\circ}$	

#### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	3.13	°C/W





	mm	
DIM	MIN	MAX
Α	10.70	10.95
В	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
Н	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
٧	1.17	1.37



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**BD678** 

#### **ELECTRICAL CHARACTERISTICS**

Tc=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -50mA; I <sub>B</sub> = 0	-60		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -1.5A; I <sub>B</sub> = -30mA		-2.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -1.5A; V <sub>CE</sub> = -3V		-2.5	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -60V; I <sub>B</sub> = 0		-0.5	mA
Ісво	Collector Cutoff Current	V <sub>CB</sub> = -60V; I <sub>E</sub> = 0 V <sub>CB</sub> = -60V; I <sub>E</sub> = 0;T <sub>C</sub> = 100°C		-0.2 -2.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0		-2.0	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -1.5 A; V <sub>CE</sub> = -3V	750		

#### **NOTICE:**

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