

isc Silicon NPN Darlington Power Transistor

2SD1376

DESCRIPTION

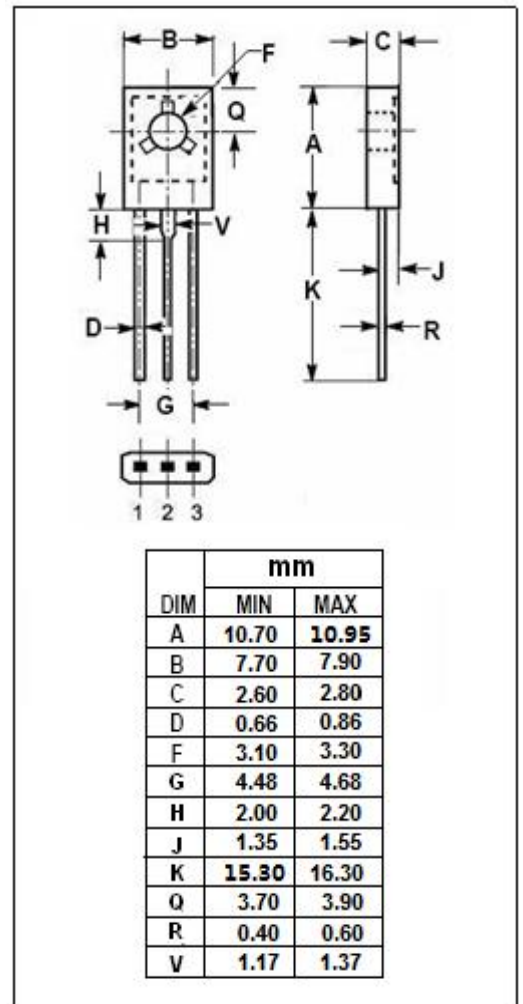
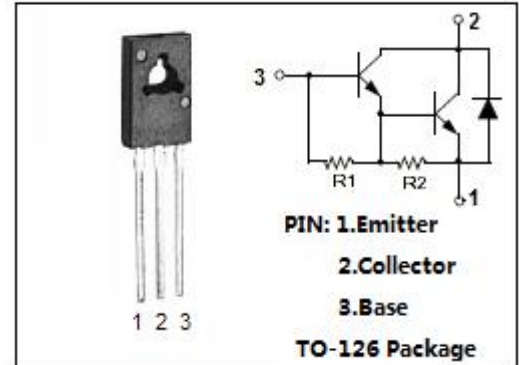
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min}) @ I_C = 1A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 120V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
- Complement to Type 2SB1012
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power 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	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Peak	3.0	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**2SD1376****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA, R _{BE} = ∞	120			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 5mA, I _C = 0	7			V
V _{CE(sat)} -1	Collector-Emitter Saturation Voltage	I _C = 1A, I _B = 1mA			1.5	V
V _{CE(sat)} -2	Collector-Emitter Saturation Voltage	I _C = 1.5A, I _B = 1.5mA			2.0	V
V _{BE(sat)} -1	Base-Emitter Saturation Voltage	I _C = 1A, I _B = 1mA			2.0	V
V _{BE(sat)} -2	Base-Emitter Saturation Voltage	I _C = 1.5A, I _B = 1.5mA			2.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V, I _E = 0			100	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 100V, R _{BE} = ∞			10	μ A
h _{FE}	DC Current Gain	I _C = 1A ; V _{CE} = 3V	2000		30000	
V _{ECF}	C-E Diode Forward Voltage	I _F = 1.5A			3.0	V

Switching Times

t _{on}	Turn-On Time	I _C = 1A, I _{B1} = I _{B2} = 1mA		0.5		μ s
t _{off}	Turn-Off Time			2.0		μ s

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