

isc Silicon NPN Darlington Power Transistor

2SD1126

DESCRIPTION

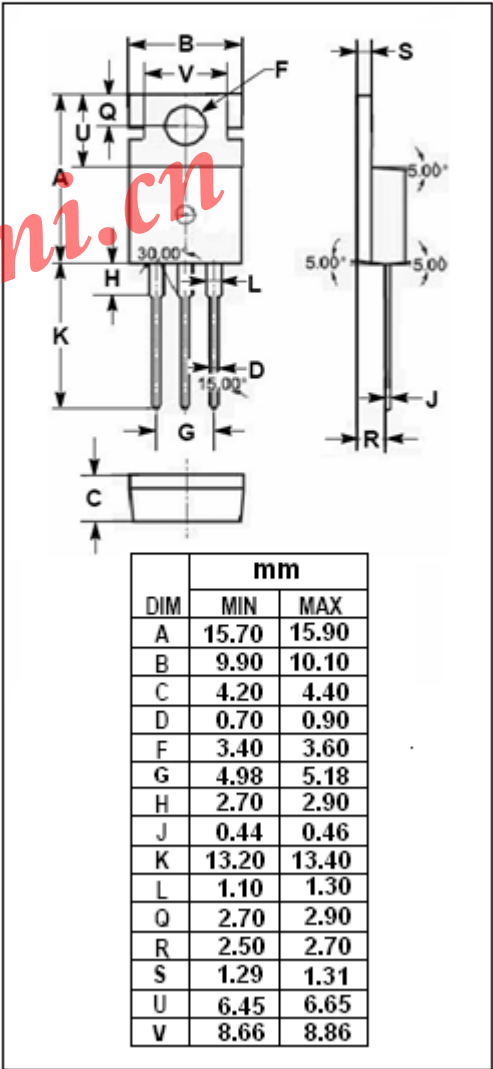
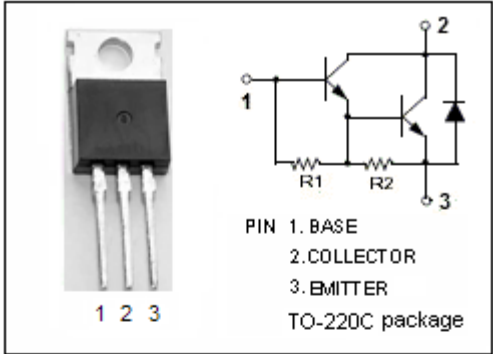
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO}=120V(\text{Min})$
- High DC Current Gain
: $h_{FE}=1000(\text{Min}) @ I_C=5A$
- Low Saturation Voltage

APPLICATIONS

- Designed for power switching 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	10	A
I_{CP}	Collector Current-Peak	15	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	50	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**2SD1126****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 25\text{mA}; R_{BE} = \infty$	120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 200\text{mA}; I_C = 0$	7			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = 5\text{A}; I_B = 10\text{mA}$			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = 10\text{A}; I_B = 0.1\text{A}$			3.0	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C = 5\text{A}; I_B = 10\text{mA}$			2.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C = 10\text{A}; I_B = 0.1\text{A}$			3.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = 120\text{V}; I_E = 0$			100	μA
I_{CEO}	Collector Cutoff Current	$V_{CE} = 100\text{V}; R_{BE} = \infty$			10	μA
h_{FE}	DC Current Gain	$I_C = 5\text{A}; V_{CE} = 3\text{V}$	1000		20000	
V_{ECF}	C-E Diode Forward Voltage	$I_F = 10\text{A}$			3.0	V

Switching times

t_{on}	Turn-on Time	$I_C = 5\text{A}, I_{B1} = -I_{B2} = 10\text{mA}$		0.8		μs
t_{off}	Turn-Off Time			8.0		μs