

## isc Silicon NPN Darlington Power Transistor

2SD1128

## DESCRIPTION

- Excellent linearity in  $h_{FE}$
- High DC Current Gain
- High Reliability
- Excellent Safe Operating Area
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

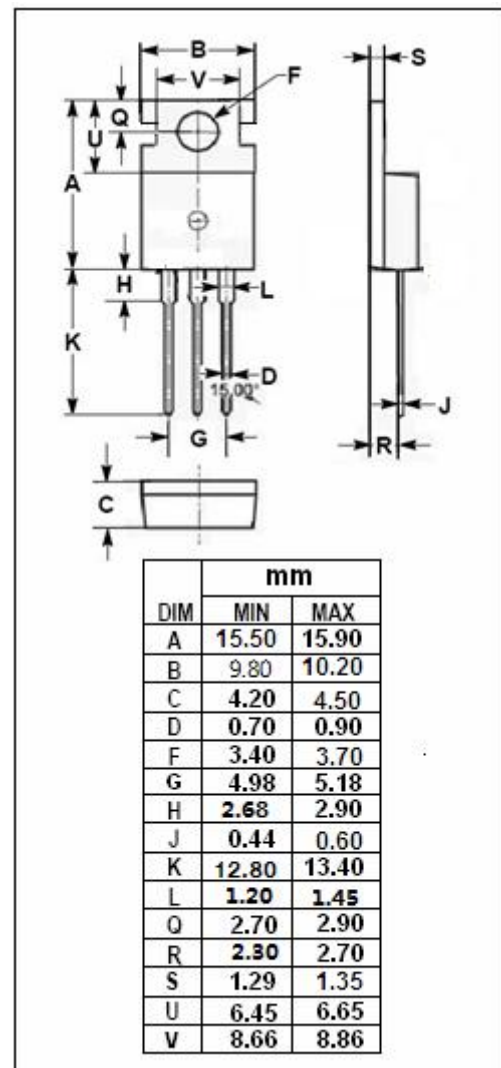
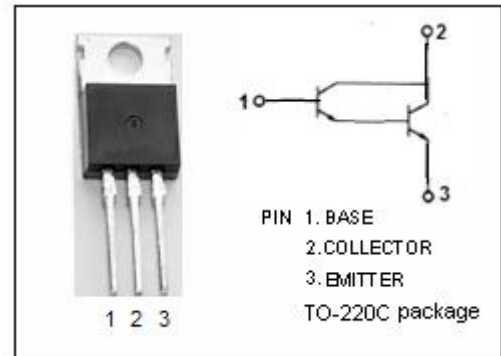
- Color & B/W TV power
- supply Active power filter
- Industrial use power supply (series regulator)
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	100	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	5	A
$I_B$	Base Current-Continuous	0.5	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	30	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	4.1	$^\circ\text{C/W}$



**isc Silicon NPN Darlington Power Transistor****2SD1128****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector- Base Breakdown Voltage	I <sub>C</sub> = 1mA ; I <sub>E</sub> = 0	150			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA ; I <sub>B</sub> = 0	100			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 1mA; I <sub>C</sub> = 0	6			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 1.5A; I <sub>B</sub> = 50mA			1.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 1.5A; I <sub>B</sub> = 50mA			2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 150V; I <sub>E</sub> = 0			1	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 1A; V <sub>CE</sub> = 4V	700			

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