

isc Silicon NPN Darlington Power Transistor

2SD1127

**DESCRIPTION**

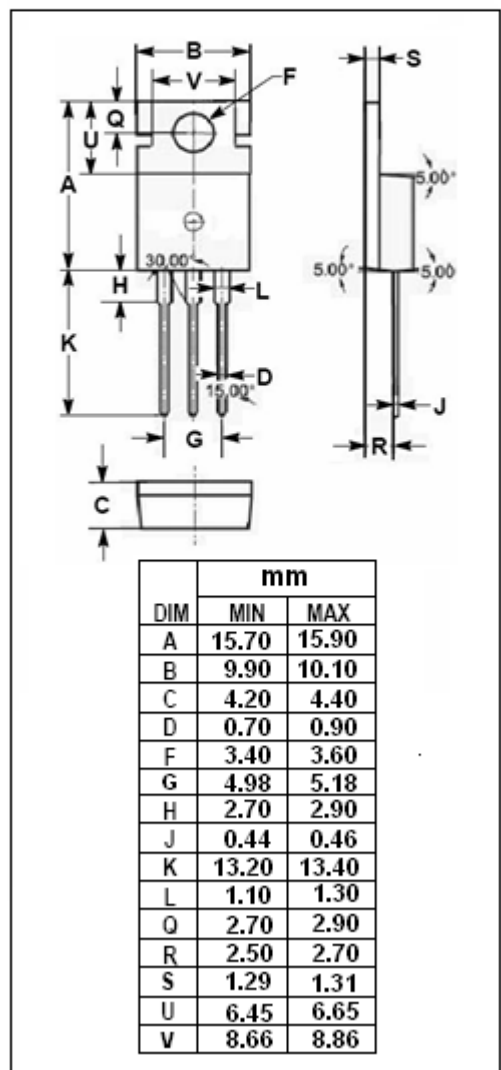
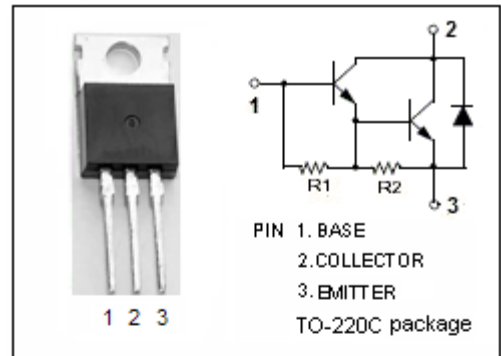
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 120V(\text{Min})$
- High DC Current Gain  
:  $h_{FE} = 1000(\text{Min}) @ I_C = 10A$
- Low Saturation Voltage

**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****2SD1127****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; R_{BE}=\infty$	120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=200\text{mA}; I_C=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=25\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=25\text{mA}$			2.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=120\text{V}; I_E=0$			100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=10\text{A}; V_{CE}=2\text{V}$	1000			

## Switching times

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