

isc Silicon NPN Darlington Power Transistor

2SD1141

DESCRIPTION

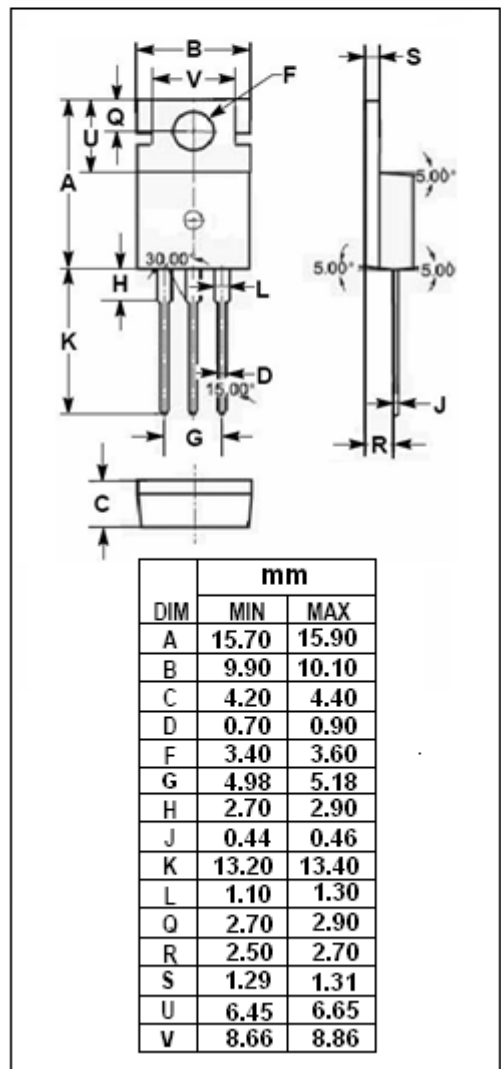
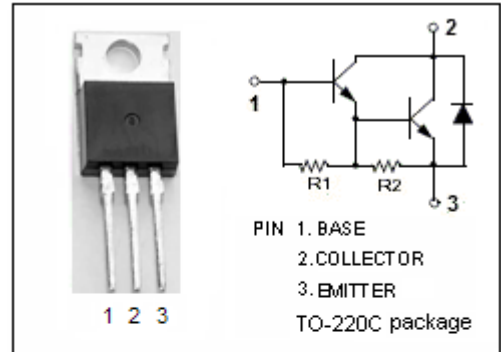
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 300V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 500(\text{Min}) @ I_C = 4A$

APPLICATIONS

- Designed for high voltage switching, igniter applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	300	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	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**2SD1141****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=3\text{A}$; $L=10\text{mH}$, $PW=50\mu\text{s}$; $f=50\text{Hz}$	300			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=0.1\text{mA}$; $I_E=0$	400			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=50\text{mA}$; $I_C=0$	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}$; $I_B=40\text{mA}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}$; $I_B=40\text{mA}$			2.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=300\text{V}$; $R_{BE}=\infty$			100	μA
h_{FE}	DC Current Gain	$I_C=4\text{A}$; $V_{CE}=2\text{V}$	500			

Switching times

t_{on}	Turn-on Time	$I_C=4\text{A}$, $I_{B1}=-I_{B2}=40\text{mA}$		2.0		μs
t_{off}	Turn-Off Time			23		μs