

**isc Silicon NPN Darlington Power Transistor**
**ST901T**
**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 350V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

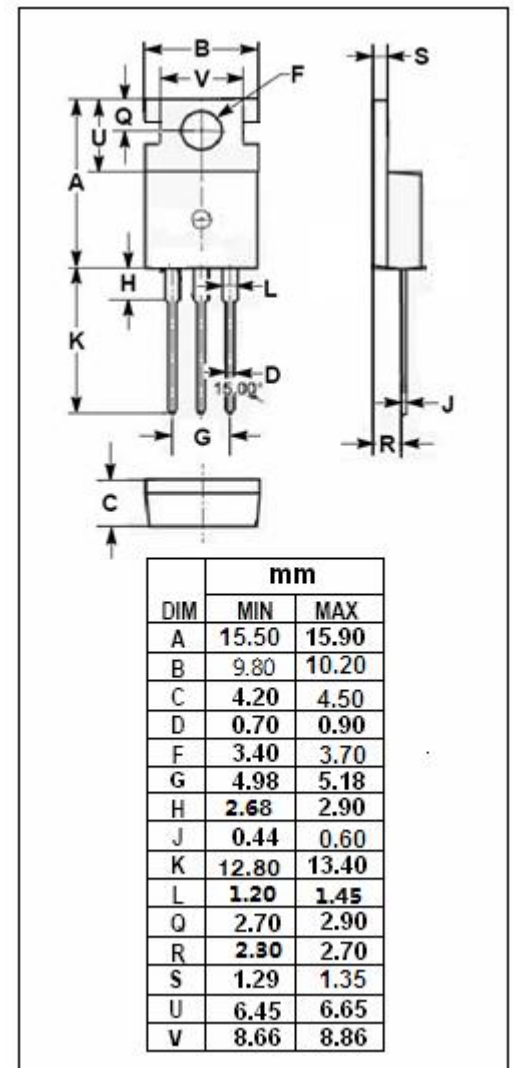
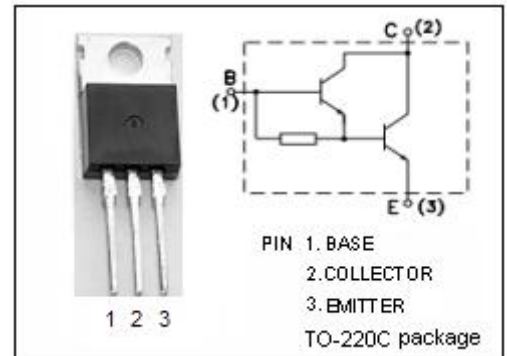
- High ruggedness electronic ignitino for small engines

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	350	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	4	A
$I_{CM}$	Collector Current-peak	8	A
$I_B$	Base Current	0.5	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	100	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5.0	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 10mA; I <sub>B</sub> = 0	350			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> =2A; I <sub>B</sub> = 20mA			1.3	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> =2A; I <sub>B</sub> = 20mA			1.8	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =500V; I <sub>E</sub> = 0 V <sub>CB</sub> = 500V; I <sub>E</sub> = 0; T <sub>j</sub> = 125°C			0.1 0.5	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CB</sub> =350V; I <sub>E</sub> = 0 V <sub>CB</sub> =350V; I <sub>E</sub> = 0; T <sub>j</sub> = 125°C			0.1 0.5	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			1	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 2A; V <sub>CE</sub> = 2V I <sub>C</sub> = 4A; V <sub>CE</sub> = 2V	1500 500			

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