

**isc Silicon NPN Darlington Power Transistor**

**2SD706**

**DESCRIPTION**

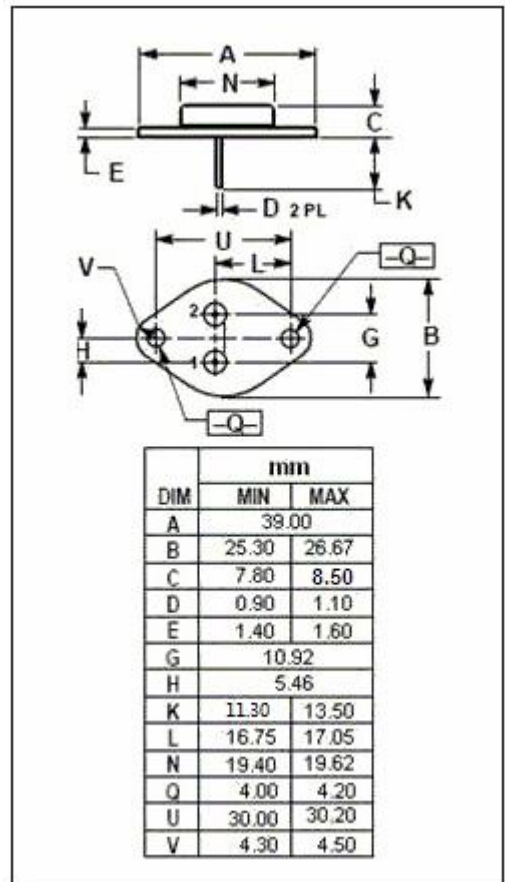
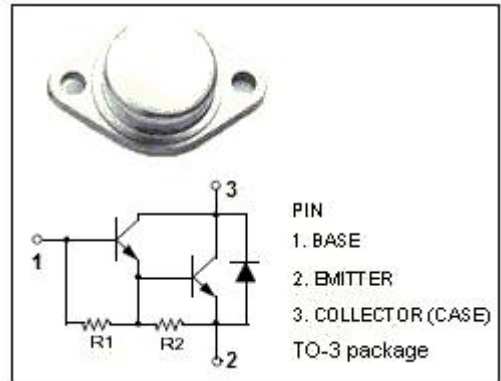
- Low Collector Saturation Voltage
- High DC Current Gain
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- High ruggedness electronic ignitions
- High voltage ignition coil driver
- General purpose power amplifiers

**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	345	V
V <sub>CEO</sub>	Collector-Emitter Voltage	345	V
V <sub>EBO</sub>	Emitter-Base Voltage	10	V
I <sub>C</sub>	Collector Current	6	A
I <sub>B</sub>	Base Current	1	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	80	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C



**isc Silicon NPN Darlington Power Transistor****2SD706****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 40mA			1.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 40mA			2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> =345V; I <sub>E</sub> =0			0.1	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 345V; I <sub>B</sub> = 0			0.5	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 10V; I <sub>C</sub> = 0			20	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 1.5V	1000			
Switching times						
t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = 4A , I <sub>B1</sub> = I <sub>B2</sub> = 40mA			1.0	μ s
t <sub>stg</sub>	Storage Time				8.0	μ s
t <sub>f</sub>	Fall Time				5.0	μ s

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