

**isc Silicon NPN Power Transistor**
**2SC5886A**
**DESCRIPTION**

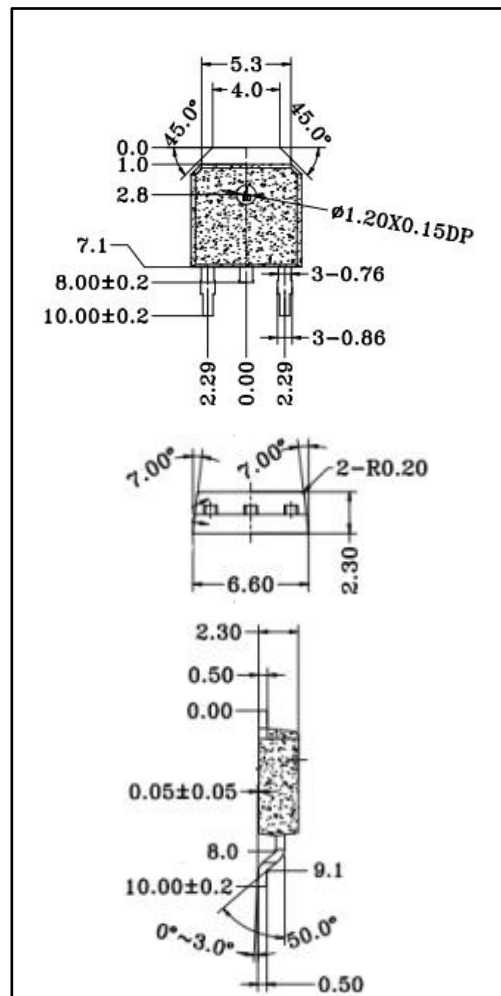
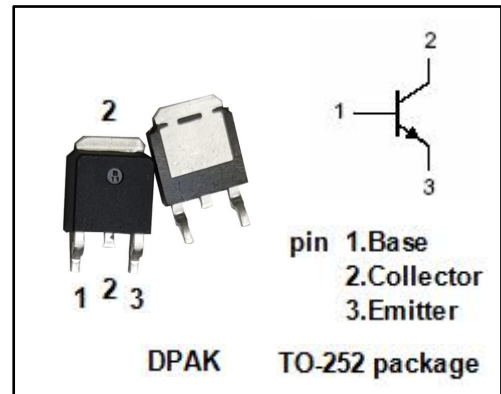
- High switching speed time
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- High-Speed Switching Applications
- DC/DC Converter Applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CB0</sub>	Collector-Base Voltage	120	V
V <sub>CEO</sub>	Collector-Emitter Voltage	50	V
V <sub>EBO</sub>	Emitter-Base Voltage	9	V
I <sub>C</sub>	Collector Current-Continuous	5	A
I <sub>CM</sub>	Collector Current-peak	10	A
I <sub>B</sub>	Base Current	0.5	A
P <sub>C</sub>	Collector Power Dissipation T <sub>a</sub> =25°C	1.0	W
	Collector Power Dissipation T <sub>c</sub> =25°C	20	
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



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## 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> = 1.6A; I <sub>B</sub> = 32mA	-	-	0.22	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 1.6A; I <sub>B</sub> = 32mA	-	-	1.10	V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 10mA; I <sub>B</sub> = 0	50	-	-	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = 120V; I <sub>E</sub> = 0	-	-	100	nA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 9V; I <sub>C</sub> = 0	-	-	100	nA
h <sub>FE1</sub>	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 2V	400	-	1000	
h <sub>FE2</sub>	DC Current Gain	I <sub>C</sub> = 1.6A; V <sub>CE</sub> = 2V	200	-	-	
t <sub>r</sub>	Rise time	V <sub>CC</sub> = 24 V, I <sub>B1</sub> = I <sub>B2</sub> =- 50 mA	-	60	-	nS
t <sub>stg</sub>	Storage time		-	500	-	
t <sub>f</sub>	Fall time		-	95	-	

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