

## Silicon NPN Power Transistors

## 2SC3420

## DESCRIPTION

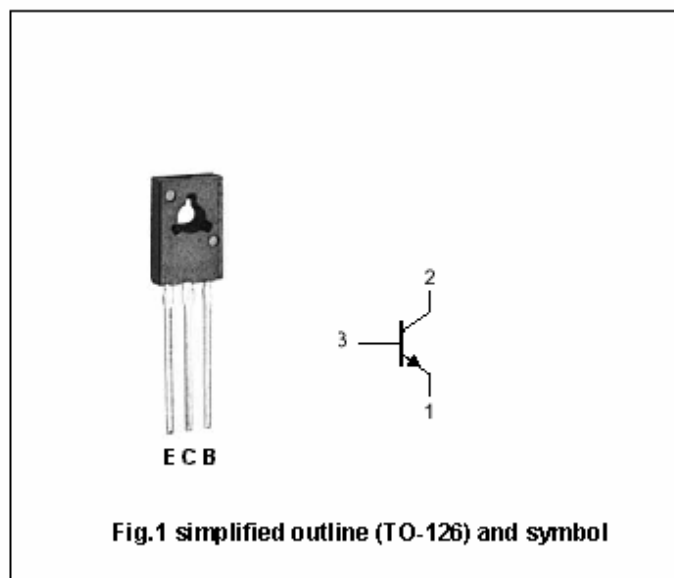
- With TO-126 package
- High DC current gain
- Low saturation voltage
- High collector power dissipation

## APPLICATIONS

- Strobe flash applications
- Medium power amplifier applications

## PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector; connected to mounting base
3	Base

Absolute maximum ratings( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	50	V
$V_{CEO}$	Collector-emitter voltage	Open base	20	V
$V_{EBO}$	Emitter-base voltage	Open collector	8	V
$I_C$	Collector current		5	A
$I_{CM}$	Collector current-peak		8	A
$I_B$	Base current		1	A
$P_C$	Collector power dissipation	$T_a=25$	1.5	W
		$T_C=25$	10	
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55 ~ +150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I <sub>CBO</sub>	Collector cutoff current	V <sub>CB</sub> =40V; I <sub>E</sub> =0			100	nA
I <sub>EBO</sub>	Emitter cutoff current	V <sub>EB</sub> =8V; I <sub>C</sub> =0			100	nA
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	20			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =0.1A			1	V
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =4A ; V <sub>CE</sub> =2V			1.5	V
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V	140		600	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =2V	70			
C <sub>Ob</sub>	Output capacitance	I <sub>E</sub> =0; V <sub>CB</sub> =10V; f=1MHz		40		pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V,		100		MHz

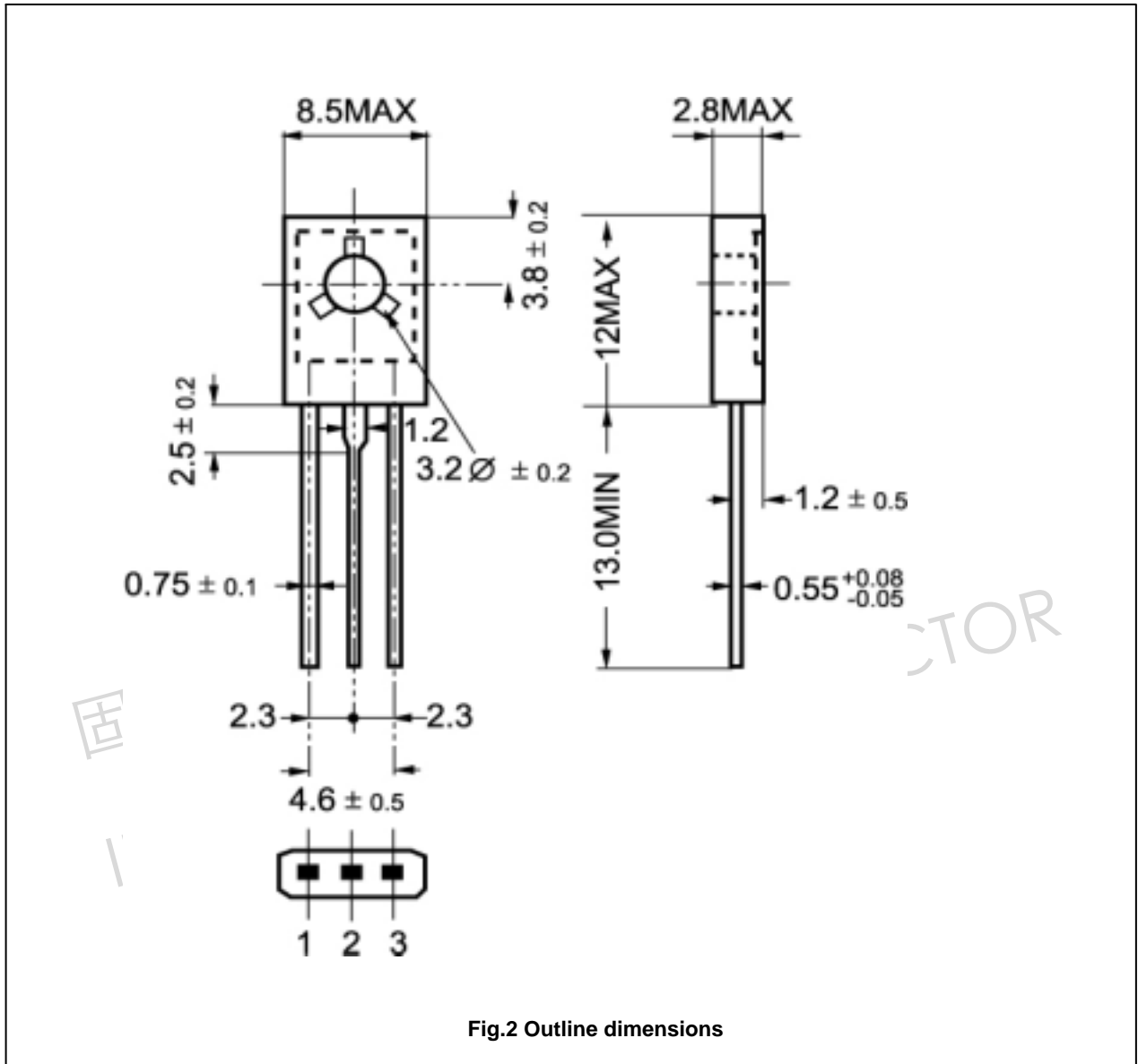
◆ h<sub>FE-1</sub> Classifications

Y	GR	BL
140-240	200-400	300-600

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PACKAGE OUTLINE



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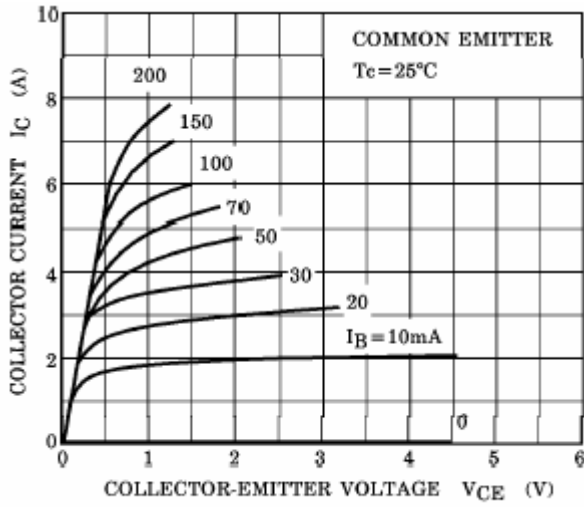


Fig.3 Static Characteristic

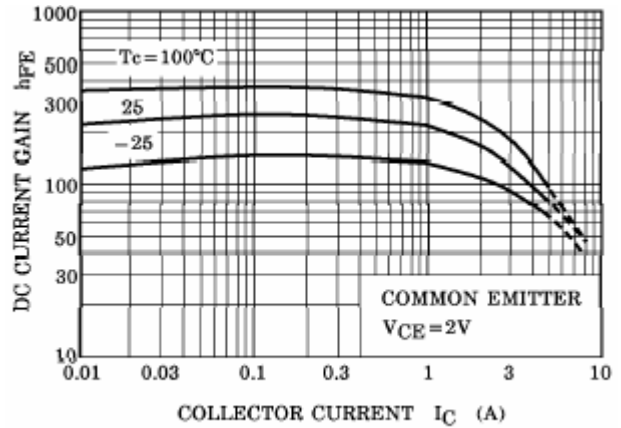


Fig.4 DC current Gain

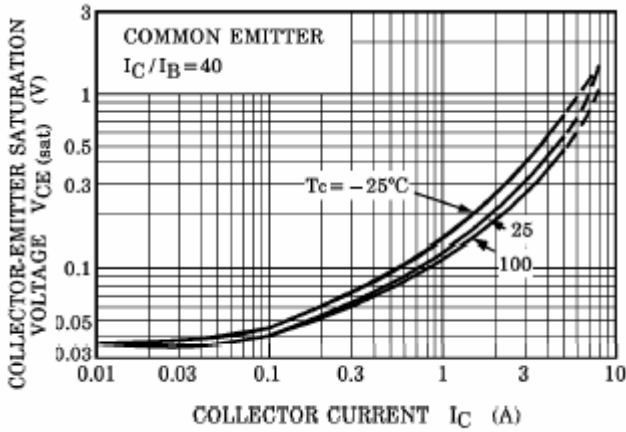


Fig.5 Collector-Emitter Saturation Voltage

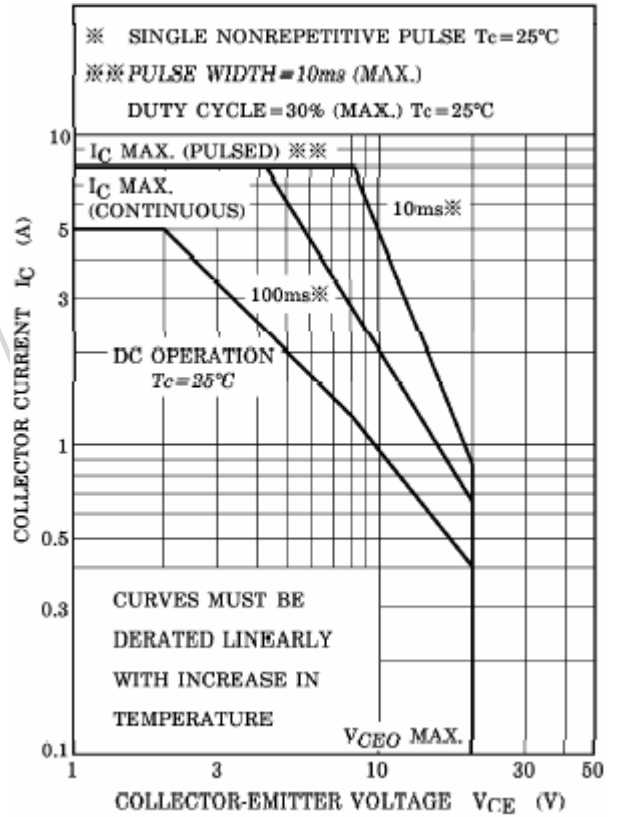


Fig.6 Safe Operating Area