

## Silicon NPN Power Transistors

## 2SC4381 2SC4382

**DESCRIPTION**

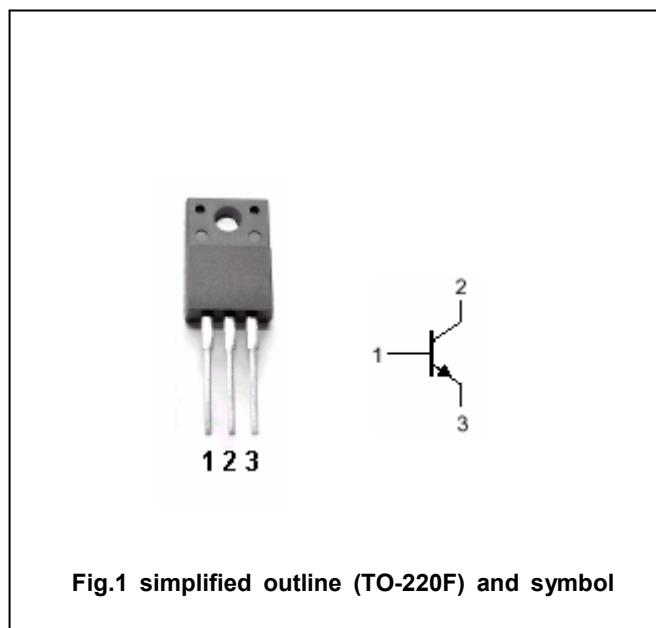
- With TO-220F package
- Complement to type 2SA1667/1668

**APPLICATIONS**

- For TV vertical output ,audio output driver and general purpose applications

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

**Absolute maximum ratings (Ta=25℃)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2SC4381	150	V
		2SC4382	200	
V <sub>CEO</sub>	Collector-emitter voltage	2SC4381	150	V
		2SC4382	200	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V
I <sub>C</sub>	Collector current		2	A
I <sub>B</sub>	Base current		1	A
P <sub>C</sub>	Collector dissipation	T <sub>C</sub> =25℃	25	W
T <sub>j</sub>	Junction temperature		150	℃
T <sub>stg</sub>	Storage temperature		-55~150	℃

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## CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	2SC4381	$I_C=25mA ; I_B=0$	150			V
		2SC4382		200			
$V_{CEsat}$	Collector-emitter saturation voltage		$I_C=0.7A ; I_B=70mA$			1.0	V
$I_{CBO}$	Collector cut-off current	2SC4381	$V_{CB}=150V ; I_E=0$			10	$\mu A$
		2SC4382	$V_{CB}=200V ; I_E=0$			10	$\mu A$
$I_{EBO}$	Emitter cut-off current		$V_{EB}=6V ; I_C=0$			10	$\mu A$
$h_{FE}$	DC current gain		$I_C=0.7A ; V_{CE}=10V$	60			
$f_T$	Transition frequency		$I_C=0.2A ; V_{CE}=12V$		15		MHz
$C_{OB}$	Output capacitance		$I_E=0 ; V_{CB}=10V ; f=1MHz$		35		pF

## Switching time

$t_{on}$	Turn-on time	$I_C=1A ; I_{B1}=-I_{B2}=0.1A$ $V_{CC}=20V , R_L=20\Omega$		1.0		$\mu s$
$t_s$	Storage time			3.0		$\mu s$
$t_f$	Fall time			1.5		$\mu s$

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PACKAGE OUTLINE

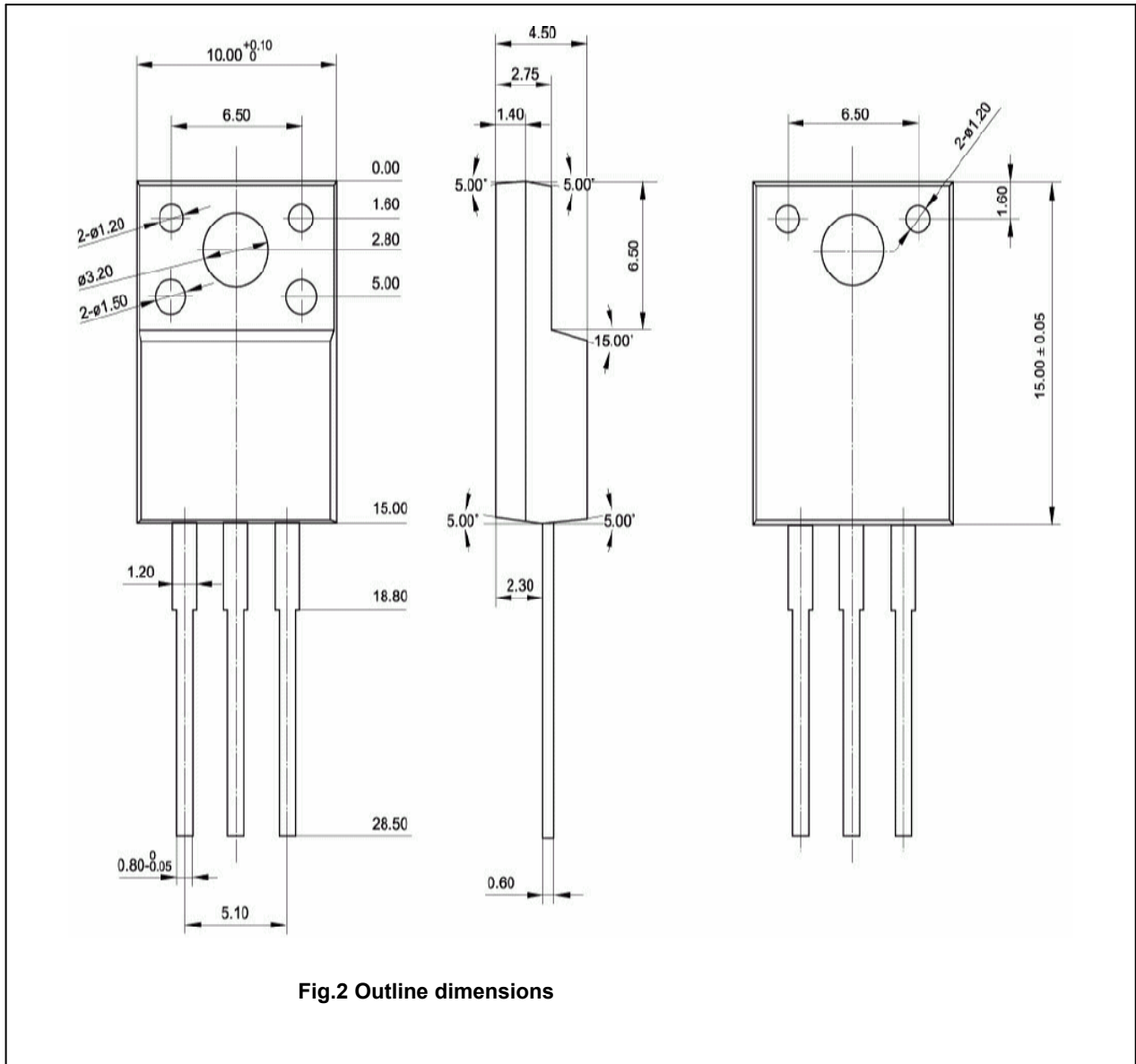


Fig.2 Outline dimensions

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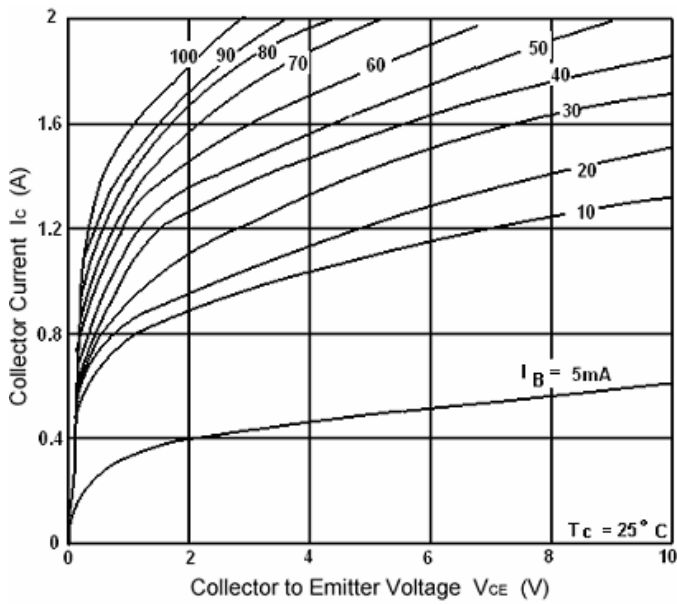


Fig.3 Static Characteristic

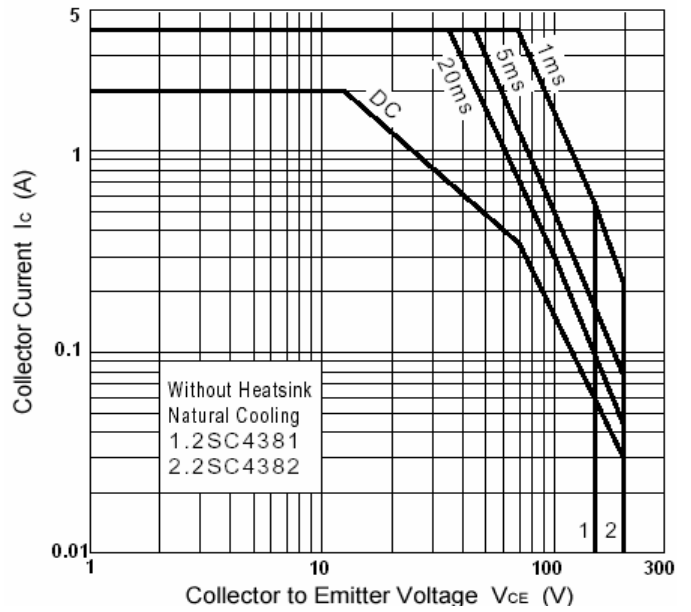


Fig.4 Safe Operating Area

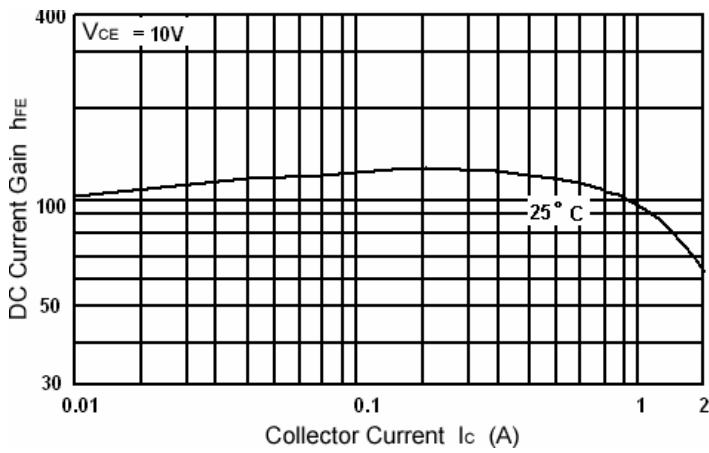


Fig.5 DC current Gain