

## GL9411A

### PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

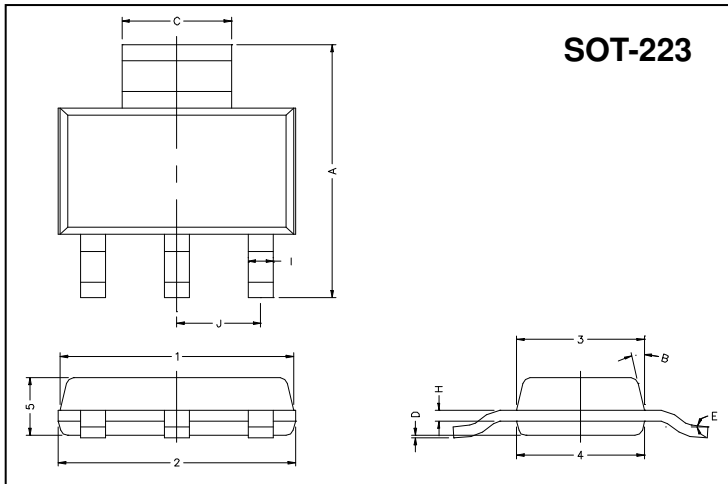
#### Description

The GL9411A is designed for general purpose switching and amplifier applications.

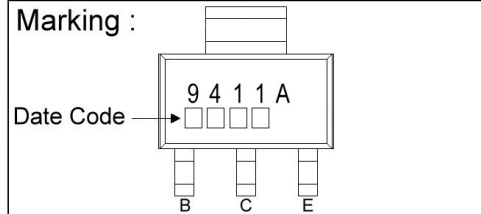
#### Features

- 4 Amps continuous current, up to 10Amps pulse current
- Low saturation voltages
- High Gain

#### Package Dimensions



Marking :



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.70	7.30	B	13°TYP.	
C	2.90	3.10	J	2.30 REF.	
D	0.02	0.10	1	6.30	6.70
E	0°	10°	2	6.30	6.70
I	0.60	0.80	3	3.30	3.70
H	0.25	0.35	4	3.30	3.70
			5	1.40	1.80

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C
Collector to Base Voltage	V <sub>CB0</sub>	-30	V
Collector to Emitter Voltage	V <sub>CE0</sub>	-25	V
Emitter to Base Voltage	V <sub>EBO</sub>	-5	V
Collector Current (DC)	I <sub>c</sub>	-4	A
Collector Current (Pulse)	I <sub>CM</sub>	-10	A
Total Power Dissipation	P <sub>D</sub>	2.5	W

\*The power which can be dissipated assuming the device is mounted in typical manner on a PCB with copper equal to 2 inches x 2 inches.

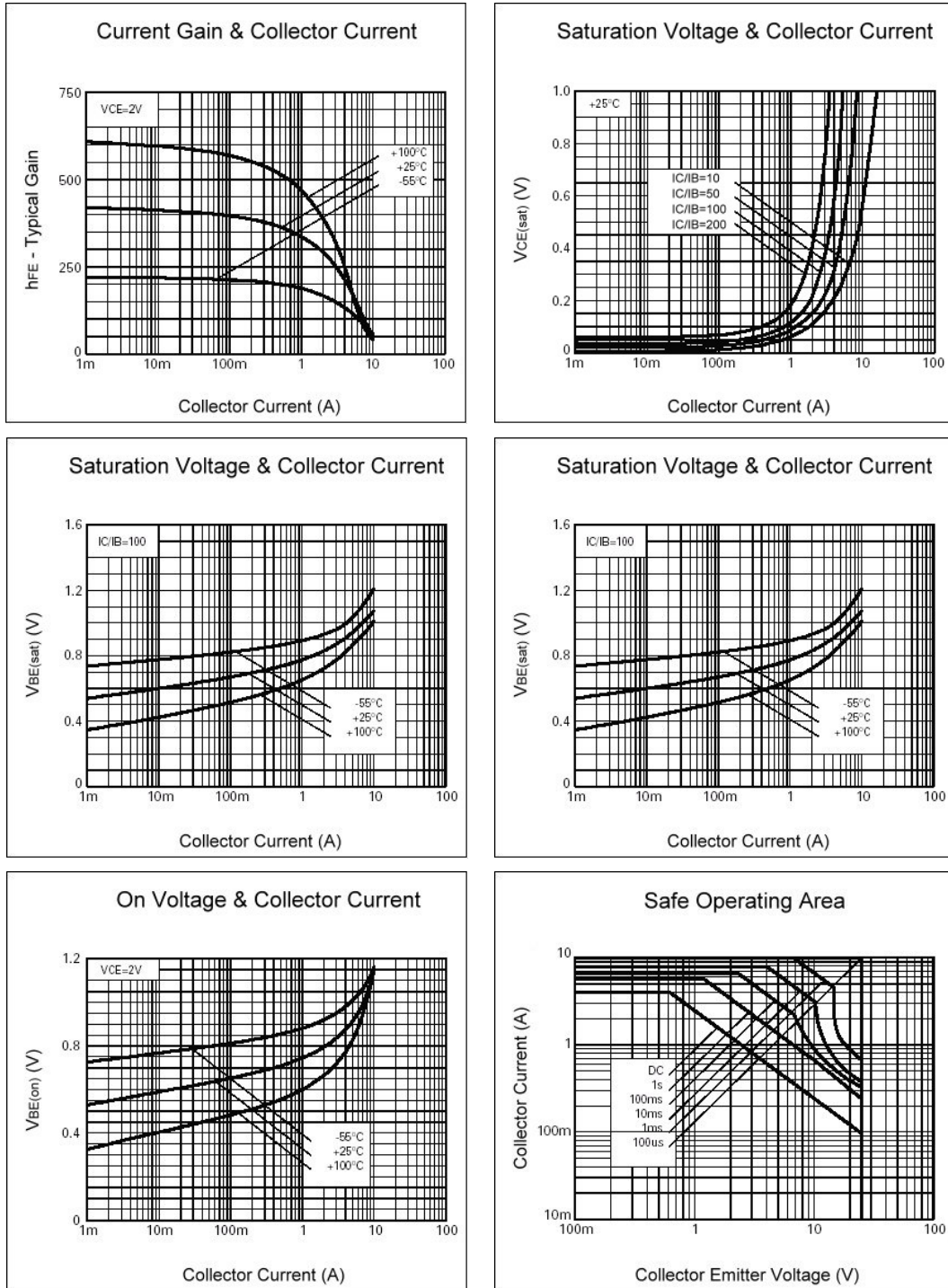
#### Electrical Characteristics (Ta = 25°C, unless otherwise stated)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V <sub>CB0</sub>	-30	-	-	V	I <sub>c</sub> =-100uA, I <sub>E</sub> =0
V <sub>CE0</sub>	-25	-	-	V	I <sub>c</sub> =-100uA
*V <sub>CE0</sub>	-25	-	-	V	I <sub>c</sub> =-10mA, I <sub>B</sub> =0
V <sub>CEV</sub>	-25	-	-	V	I <sub>c</sub> =-100uA, V <sub>EB</sub> =1V
V <sub>EBO</sub>	-5	-	-	V	I <sub>E</sub> =-100uA, I <sub>c</sub> =0
I <sub>CB0</sub>	-	-	-100	nA	V <sub>CB</sub> =-24V, I <sub>E</sub> =0
I <sub>CE0</sub>	-	-	-100	nA	V <sub>CE</sub> =-20V
I <sub>EBO</sub>	-	-	-100	nA	V <sub>EB</sub> =-4V, I <sub>c</sub> =0
*V <sub>CE(sat)1</sub>	-	-	-80	mV	I <sub>c</sub> =-100mA, I <sub>B</sub> =-1mA
*V <sub>CE(sat)2</sub>	-	-	-170	mV	I <sub>c</sub> =-500mA, I <sub>B</sub> =-3mA
*V <sub>CE(sat)3</sub>	-	-	-240	mV	I <sub>c</sub> =-1A, I <sub>B</sub> =-7mA
*V <sub>CE(sat)4</sub>	-	-	-260	mV	I <sub>c</sub> =-2A, I <sub>B</sub> =-30mA
*V <sub>CE(sat)5</sub>	-	-	-350	mV	I <sub>c</sub> =-4A, I <sub>B</sub> =-140mA
*V <sub>BE(sat)</sub>	-	-	-1.05	V	I <sub>c</sub> =-4A, I <sub>B</sub> =-140mA
*V <sub>BE(on)</sub>	-	-	1.0	V	V <sub>CE</sub> =-2V, I <sub>c</sub> =-4A
*h <sub>FE1</sub>	270	-	-		V <sub>CE</sub> =-2V, I <sub>c</sub> =-10mA
*h <sub>FE2</sub>	250	-	800		V <sub>CE</sub> =-2V, I <sub>c</sub> =-0.5A
*h <sub>FE3</sub>	195	-	-		V <sub>CE</sub> =-2V, I <sub>c</sub> =-2A
*h <sub>FE4</sub>	115	-	-		V <sub>CE</sub> =-2V, I <sub>c</sub> =-5A

*hFE5	-	50	-		VCE=-2V, IC=-10A
fT	-	135	-	MHz	VCE=-10V, IC=-50mA, f=50MHz
Cob	-	50	-	pF	VCB=-10V, IE=0, f=1MHz
ton	-	150	-	ns	VCC=-10V, IC=-4A, IB1=-IB2=-40mA
toff	-	270	-		

\*Measured under pulse condition. Pulse width=300μs, Duty Cycles≤2%

## Characteristics Curve



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