GL9401A

NPN SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

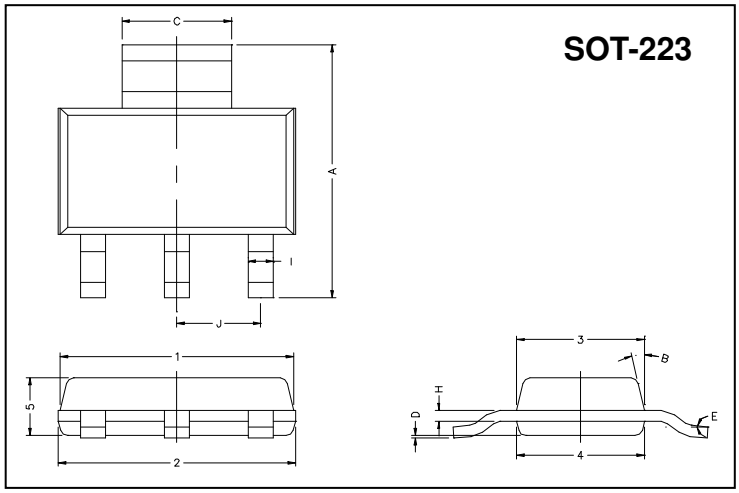
Description

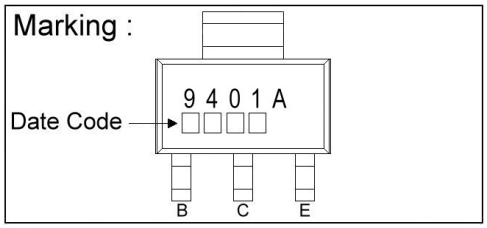
The GL9401A is designed for general purpose switching and amplifier applications.

Features

- 5 Amps continuous current, up to 20Amps pulse current
- Low saturation voltages
- High Gain

Package Dimensions





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℃

Parameter	Symbol	Ratings	Unit
Junction Temperature	Tj	+150	℃
Storage Temperature	Tstg	-55~+150	℃
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	5	A
Collector Current (Pulse)	I_{CM}	20	A
Total Power Dissipation	P_D	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.**

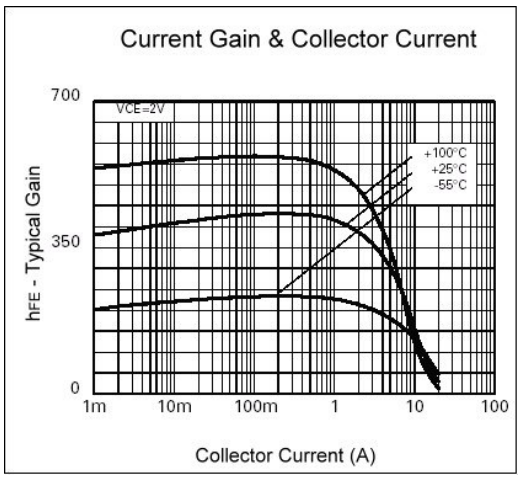
Electrical Characteristics (Ta = 25℃, unless otherwise stated)

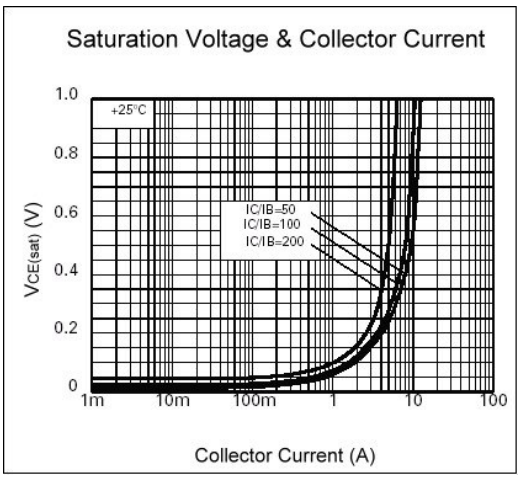
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	80	-	-	V	I_C=100uA , I_E=0
*BV_{CES}	80	-	-	V	I_C=100uA
BV_{CEO}	30	-	-	V	I_C=10mA, I_B=0
BV_{CEV}	80	-	-	V	I_C=10uA, V_{EB}=1V
BV_{EBO}	5	-	-	V	I_E=100uA ,I_C=0
I_{CBO}	-	-	10	nA	V_{CB}=35V, I_E=0
I_{CES}	-	-	10	nA	V_{CES}=35V
I_{EBO}	-	-	10	nA	V_{EB}=4V, I_C=0
*$V_{CE(sat)}$1	-	-	60	mV	I_C=500mA, I_B=10mA
*$V_{CE(sat)}$2	-	-	100	mV	I_C=1A, I_B=10mA
*$V_{CE(sat)}$3	-	-	250	mV	I_C=3A, I_B=30mA
*$V_{CE(sat)}$4	-	-	330	mV	I_C=5A, I_B=50mA
*$V_{BE(sat)}$	-	-	1.05	V	I_C=5A, I_B=50mA
*$V_{BE(on)}$	-	-	1.0	V	V_{CE}=2V, I_C=5A
*h_{FE}1	280	-	-		V_{CE}=2V, I_C=10mA
*h_{FE}2	300	-	-		V_{CE}=2V, I_C=0.5A
*h_{FE}3	300	-	1200		V_{CE}=2V, I_C=1A
*h_{FE}4	180	-	-		V_{CE}=2V, I_C=5A

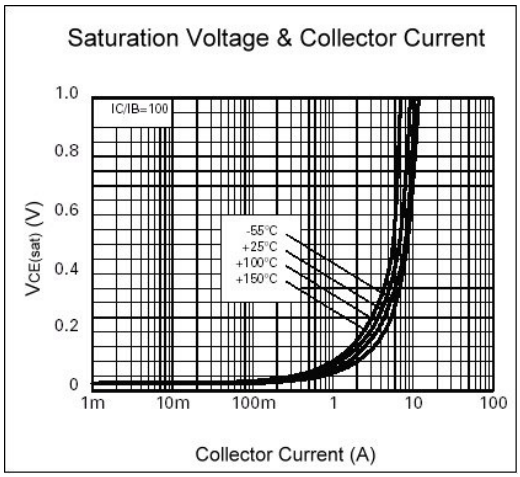
*h_{FE}5	40	-	-		V_{CE}=2V, I_C=20A
fT	-	180	-	MHz	V_{CE}=10V, I_C=50mA, f=100MHz
Cob	-	45	60	pF	V_{CB}=10V, I_E=0, f=1MHz
t_{on}	-	125	-	ns	V_{CC}=10V, I_C=4A, I_{B1}=I_{B2}=40mA
t_{off}	-	380	-		

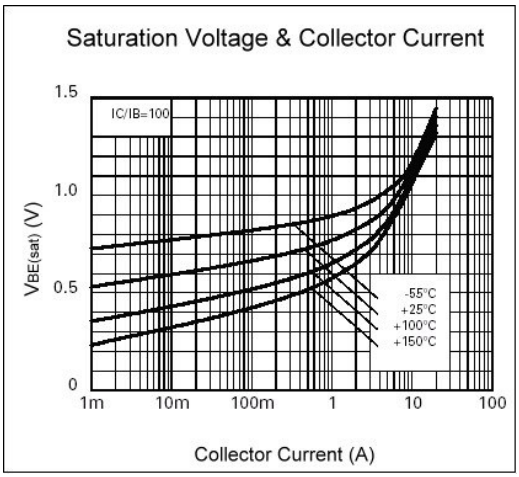
***Measured under pulse condition. Pulse width≦300μs, Duty Cycle≦2%**

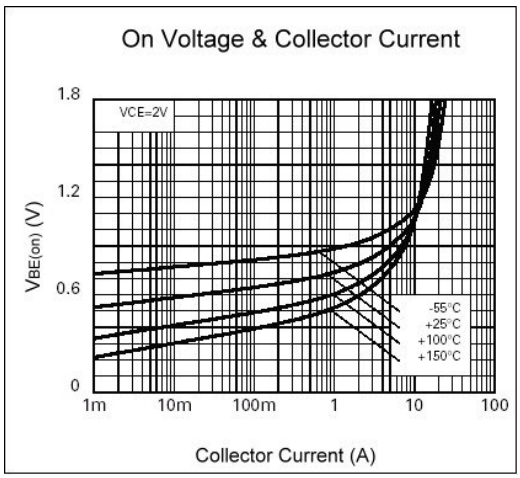
Characteristics Curve

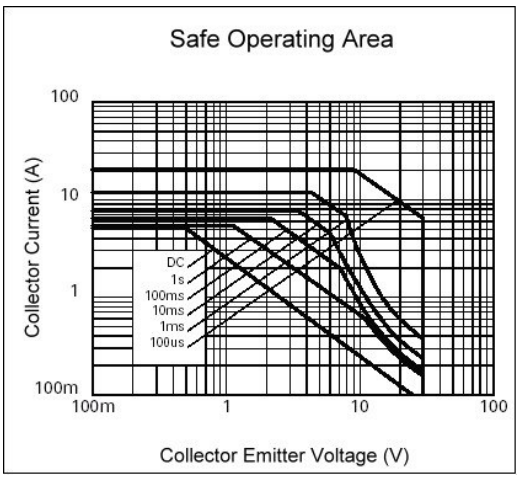












Important Notice:
- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:
- **Taiwan**: No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
  TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China**: (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
  TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165