

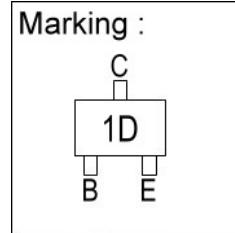
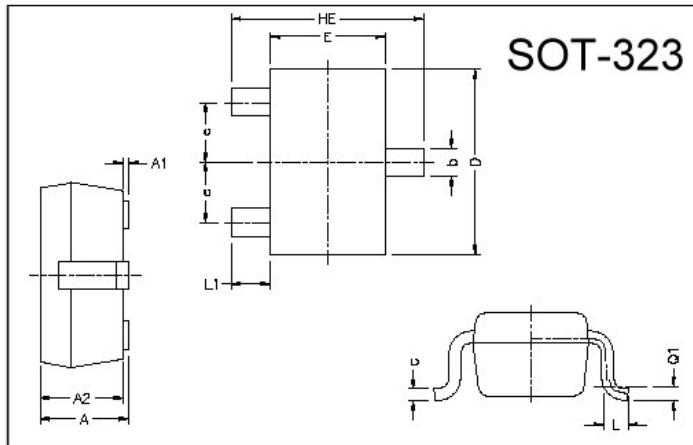
## G SMBTA42

### NPN EPITAXIAL PLANAR TRANSISTOR

#### Description

The GSMBTA42 is designed for high voltage transistor.

#### Package Dimensions



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.80	1.10	L1	0.42 REF.	
A1	0	0.10	L	0.15	0.35
A2	0.80	1.00	b	0.25	0.40
D	1.80	2.20	c	0.10	0.25
E	1.15	1.35	e	0.65 REF.	
HE	1.80	2.40	Q1	0.15 BSC.	

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

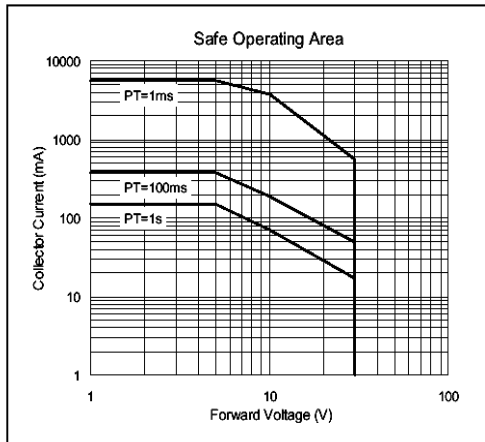
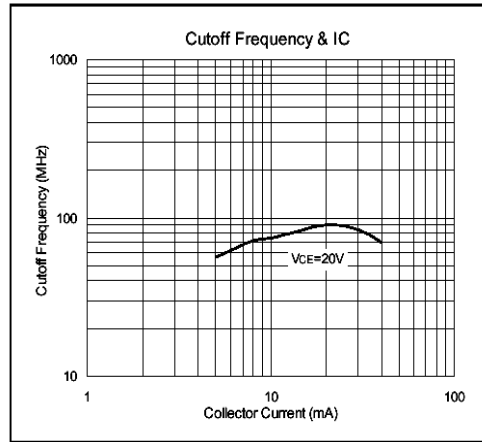
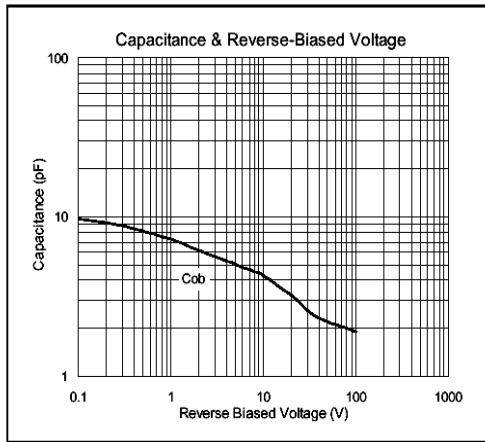
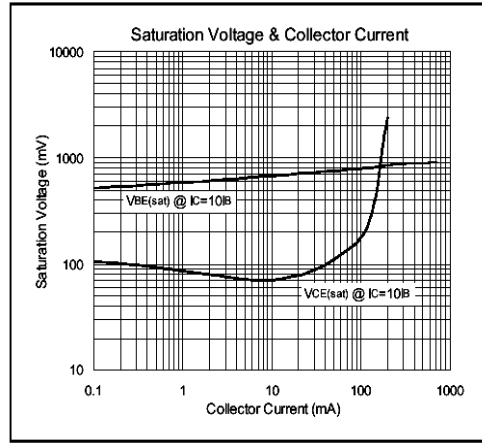
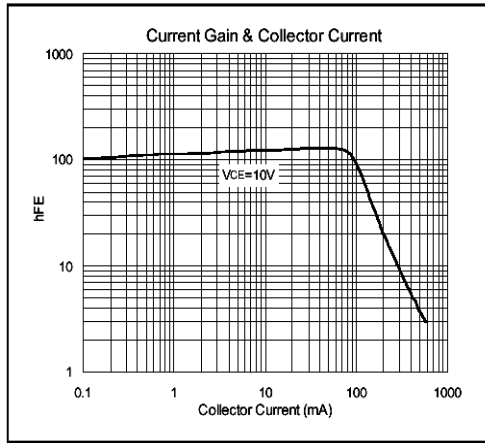
Parameter	Symbol	Ratings	Unit
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C
Collector to Base Voltage	V <sub>CB0</sub>	300	V
Collector to Emitter Voltage	V <sub>CE0</sub>	300	V
Emitter to Base Voltage	V <sub>EB0</sub>	6	V
Collector Current	I <sub>c</sub>	500	mA
Total Power Dissipation	P <sub>D</sub>	350	mW

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

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V <sub>CB0</sub>	300	-	-	V	I <sub>c</sub> =100μA, I <sub>E</sub> =0
V <sub>CE0</sub>	300	-	-	V	I <sub>c</sub> =1mA, I <sub>B</sub> =0
V <sub>EB0</sub>	6	-	-	V	I <sub>E</sub> =100μA, I <sub>c</sub> =0
I <sub>CB0</sub>	-	-	100	nA	V <sub>CB</sub> =200V, I <sub>E</sub> =0
I <sub>EB0</sub>	-	-	100	nA	V <sub>EB</sub> =6V, I <sub>c</sub> =0
*V <sub>CE(sat)</sub>	-	-	500	mV	I <sub>c</sub> =20mA, I <sub>B</sub> =2mA
*V <sub>BE(sat)</sub>	-	-	900	mV	I <sub>c</sub> =20mA, I <sub>B</sub> =2mA
*h <sub>FE1</sub>	25	-	-		V <sub>CE</sub> =10V, I <sub>c</sub> =1mA
*h <sub>FE2</sub>	40	-	-		V <sub>CE</sub> =10V, I <sub>c</sub> =10mA
*h <sub>FE3</sub>	40	-	-		V <sub>CE</sub> =10V, I <sub>c</sub> =30mA
f <sub>T</sub>	50	-	-	MHz	V <sub>CE</sub> =20V, I <sub>c</sub> =10mA, f=100MHz
C <sub>ob</sub>	-	-	3	pF	V <sub>CB</sub> =20V, I <sub>E</sub> =0, f=1MHz

\* Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

## Characteristics Curve



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**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