TECH PUBLIC
台舟电子

TP2SC1623L6

NPN Switching Transistor

www.sot23.com.tw

Features

- Epoxy meets UL-94 V-0 flammability rating.
- Surface mount package ideally suited for automatic insertion.

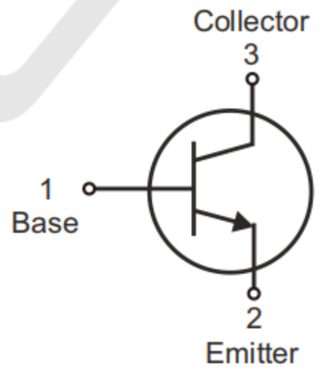
Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Mounting position: Any.

SOT23



Circuit Diagram



Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Conditions	Symbol	Value	Unit
Collector-base voltage	I_C = 100μA, I_E = 0	V_{CBO}	60	V
Collector-emitter voltage	I_C = 1mA, I_B = 0	V_{CEO}	50	V
Emitter-base voltage	I_E = 100μA, I_C = 0	V_{EBO}	5	V
Collector current		I_C	0.1	A
Collector power dissipation		P_C	200	mW
Junction temperature		T_J	150	°C
Storage temperature range		T_{STG}	-55 to +150	°C

WWW.TECHPUBLIC.COM.TW

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C = 100μA, I_E = 0	60			V
Collector-emitter breakdown voltage	V_{CEO}	I_C = 1mA, I_B = 0	50			V
Emitter-base breakdown voltage	V_{EBO}	I_E = 100μA, I_C = 0	5			V
Collector-base cut-off current	I_{CBO}	V_{CB} = 60V, I_E = 0			0.1	μA
Emitter-base cut-off current	I_{EBO}	V_{EB} = 5V, I_C = 0			0.1	μA
DC current gain	h_{FE}	V_{CE} = 6V, I_C = 1mA	135	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 100mA, I_B = 10mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 100mA, I_B = 10mA			1	V
Base-emitter voltage	V_{BE}	V_{CE} = 6V, I_C = 1mA	0.55		0.65	V
Teransition frequency	F_t	V_{CE} = 6V, I_C = 10mA		250		MHz
Collector-base output capacitance	C_{ob}	V_{CB} = 6V, I_E = 0, f = 1MHz		3		pF

Classification of hFE

Rank	2SC1623-L5-HF	2SC1623-L6-HF	2SC1623-L7-HF
Range	135-270	200-400	300-600

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig.1 - Static Characteristic

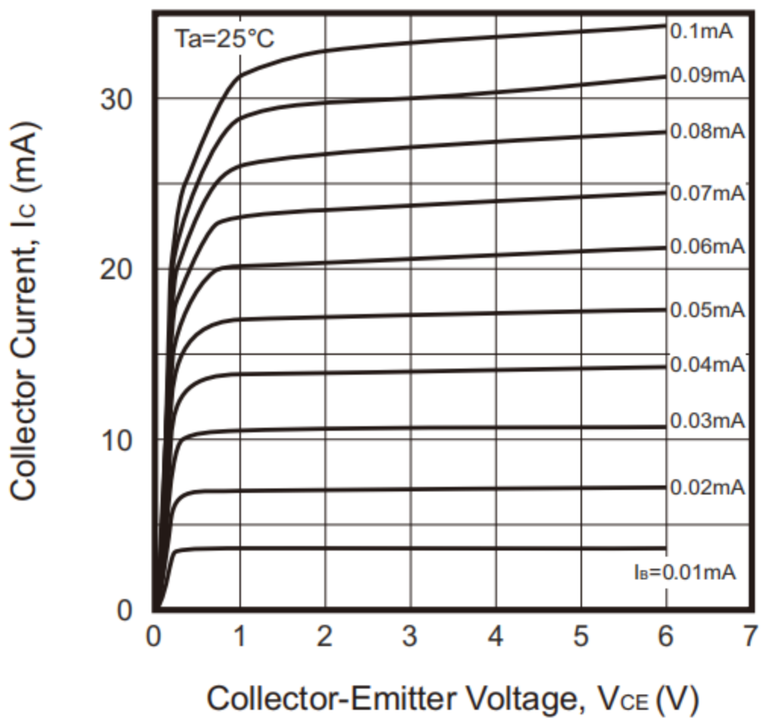


Fig.2 - DC Current Gain

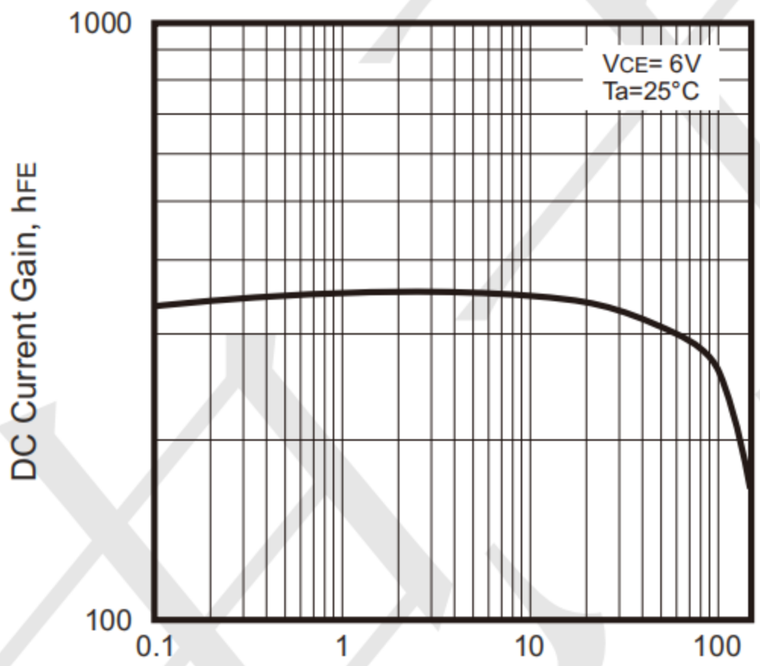


Fig.3 - Collector-Emitter Saturation Voltage

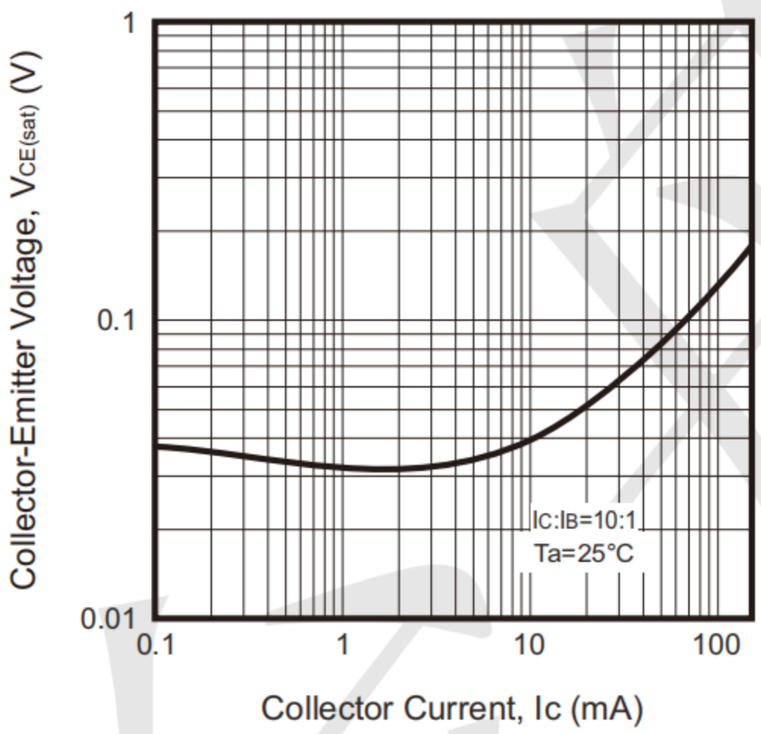


Fig.4 - Base-Emitter Saturation Voltage

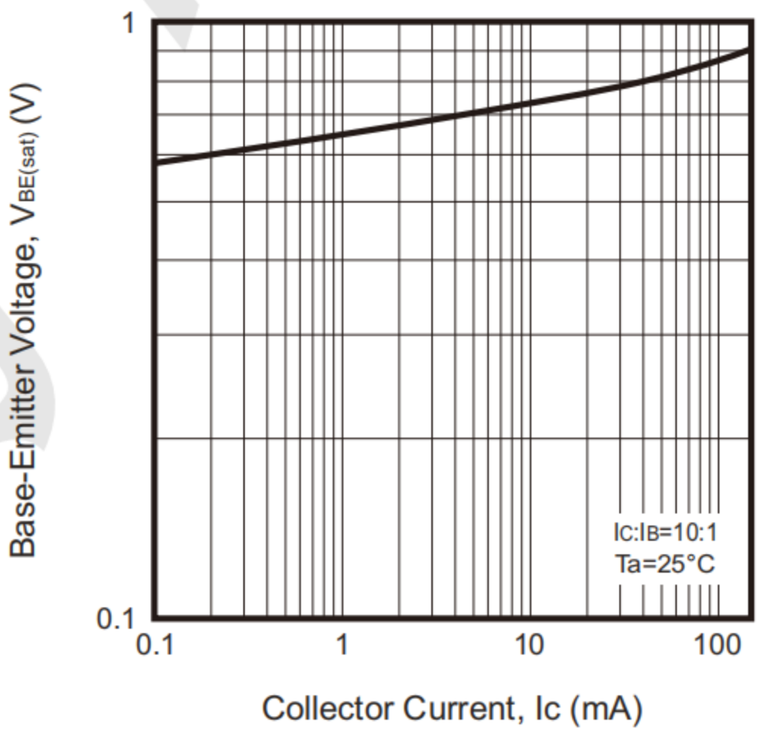


Fig.5 - Base-Emitter on Voltage

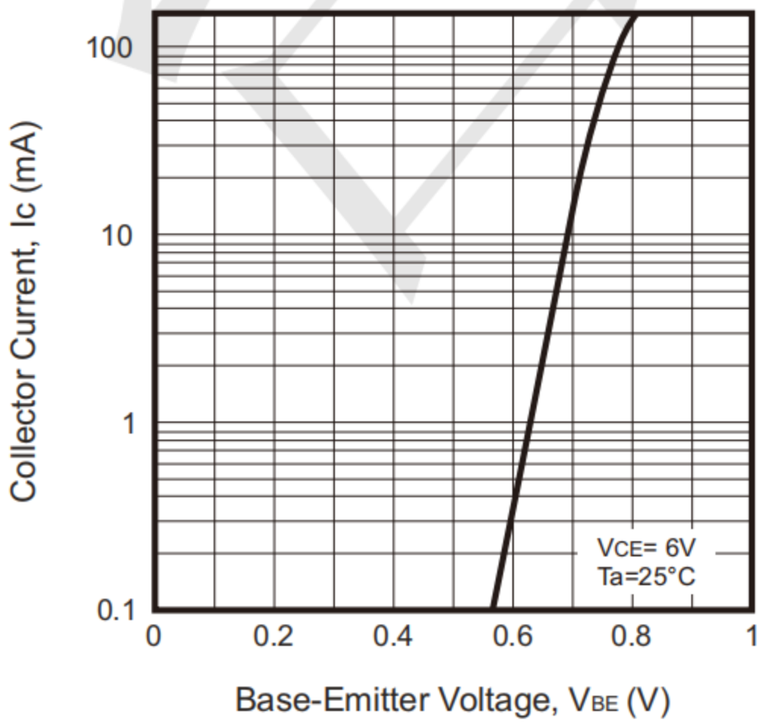
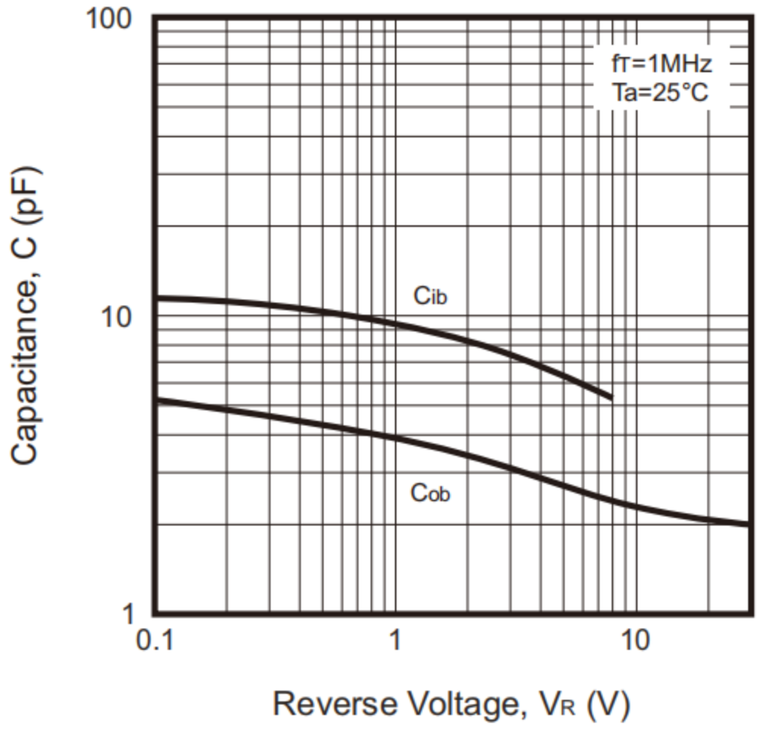
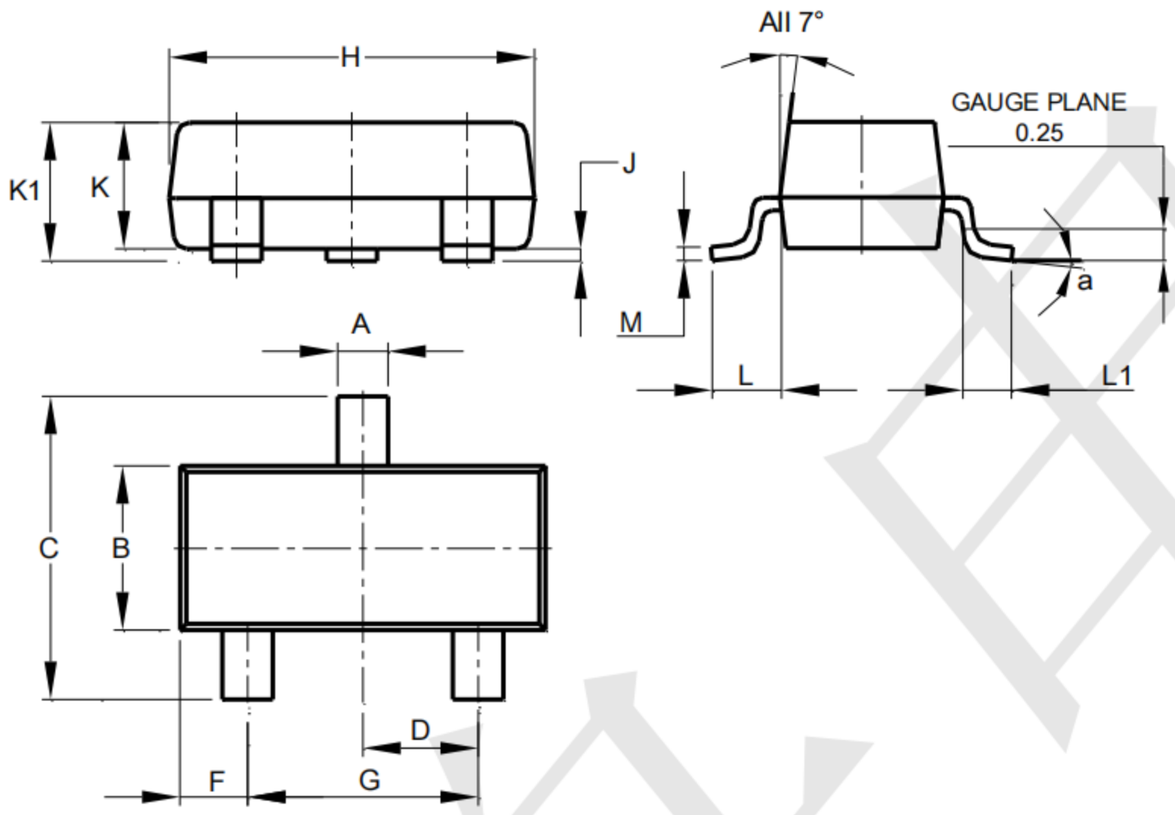


Fig.6 - C_{ob}/C_{ib} — V_{CB}/V_{EB}

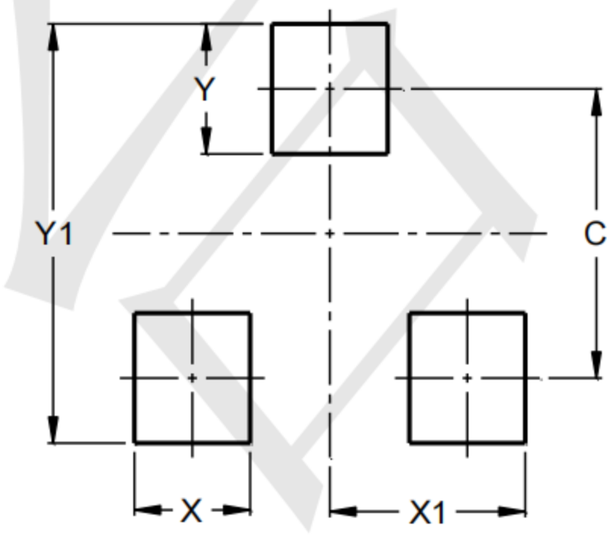


Outline Drawing - SOT23



SOT23			
Dim	Min	Max	Typ
A	0.37	0.51	0.40
B	1.20	1.40	1.30
C	2.30	2.50	2.40
D	0.89	1.03	0.915
F	0.45	0.60	0.535
G	1.78	2.05	1.83
H	2.80	3.00	2.90
J	0.013	0.10	0.05
K	0.890	1.00	0.975
K1	0.903	1.10	1.025
L	0.45	0.61	0.55
L1	0.25	0.55	0.40
M	0.085	0.150	0.110
a	0°	8°	--
All Dimensions in mm			

Land Pattern - SOT23



Dimensions	Value (in mm)
C	2.0
X	0.8
X1	1.35
Y	0.9
Y1	2.9