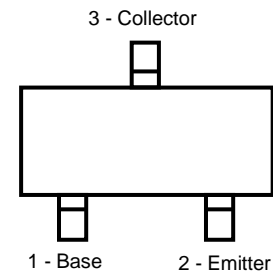


Feature

- PNP epitaxial planar silicon transistor
- Power Dissipation of 300mW
- High Stability and high reliability



Top View

Mechanical Characteristics

- Mounting position: Any
- Qualified max reflow temperature: 260°C
- Device meets MSL 1 requirements
- SOT-23 Small Outline Plastic Package

Absolute maximum rating @25°C

Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	416	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical characteristics per line@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-160	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-150	-	-	V
Emitter -Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5	-	-	V
Collector Cutoff Current	I_{CBO}	$V_{CB}=-120\text{V}, I_E=0\text{V}$	-	-	-100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$	-	-	-100	nA
DC Current Gain	H_{FE}	$I_C=-1.0\text{mA}, V_{CE}=-5.0\text{V}$	80	-	-	-
		$I_C=-10\text{mA}, V_{CE}=-5.0\text{V}$	100	-	300	
		$I_C=-50\text{mA}, V_{CE}=-5.0\text{V}$	30	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-10\text{mA}, I_B=-1.0\text{mA}$	-	-	-0.2	V
		$I_C=-50\text{mA}, I_B=-5.0\text{mA}$	-	-	-0.5	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-10\text{mA}, I_B=-1.0\text{mA}$	-	-	-1.0	V
		$I_C=-50\text{mA}, I_B=-5.0\text{mA}$	-	-	-1.0	
Transition frequency	f_T	$I_C=-10\text{mA}, V_{CE}=-5\text{V},$ $f=30\text{MHz}$	100	-	-	MHz

Typical Characteristics

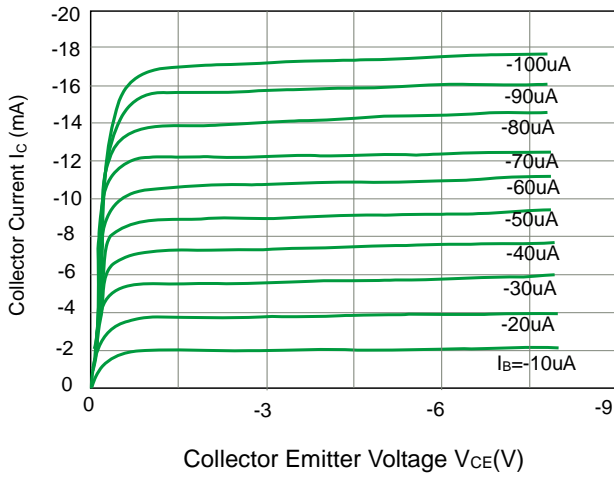


Fig 1. Static Characteristic

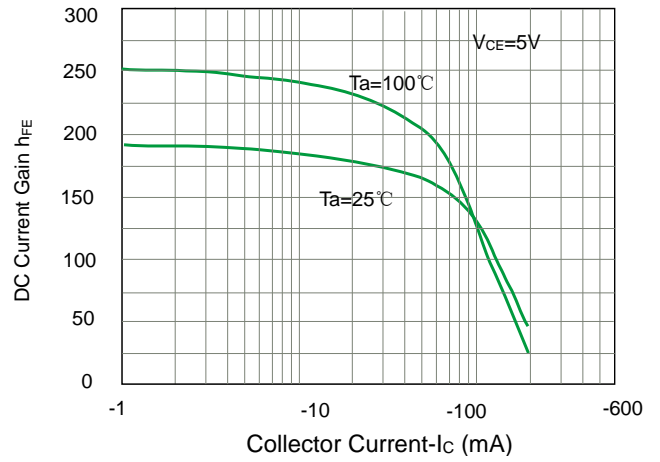


Fig2. h_{FE} ---- I_C

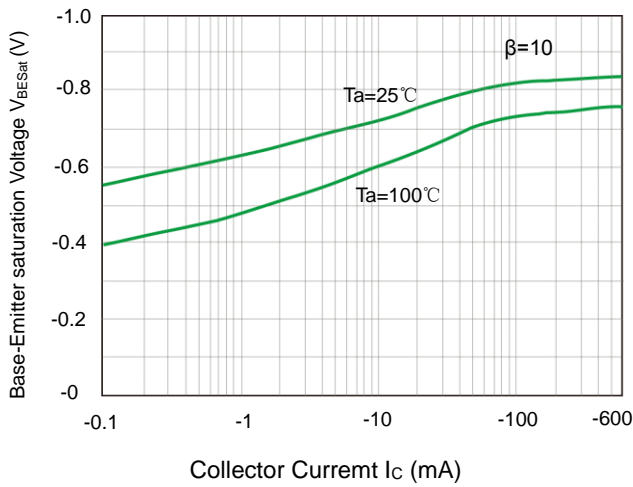


Fig 3. V_{BEsat} ---- I_C

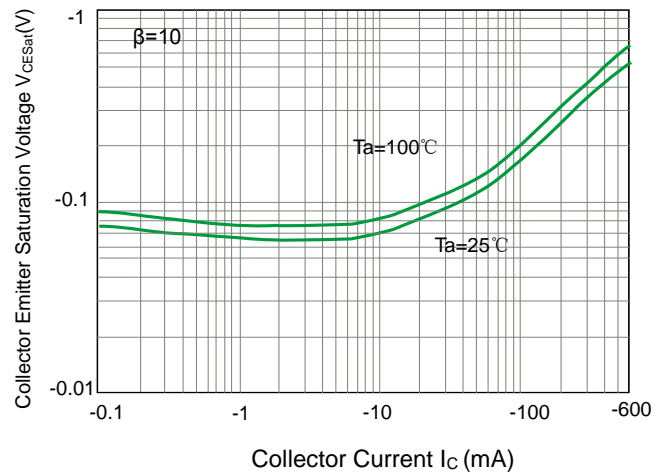


Fig4. V_{CEsat} ---- I_C

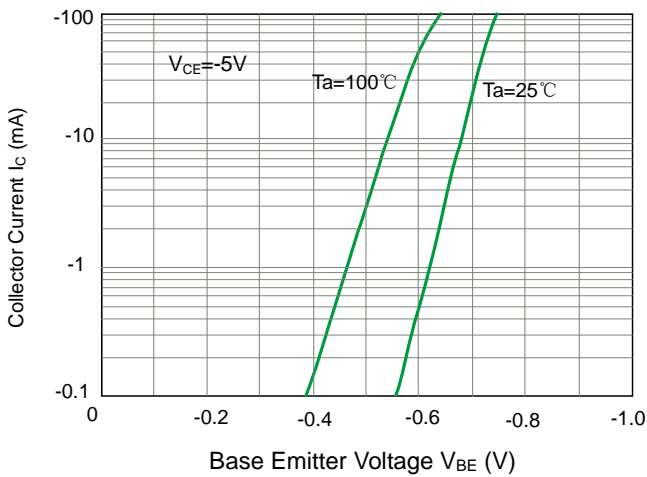


Fig 5. I_C ---- V_{BE}

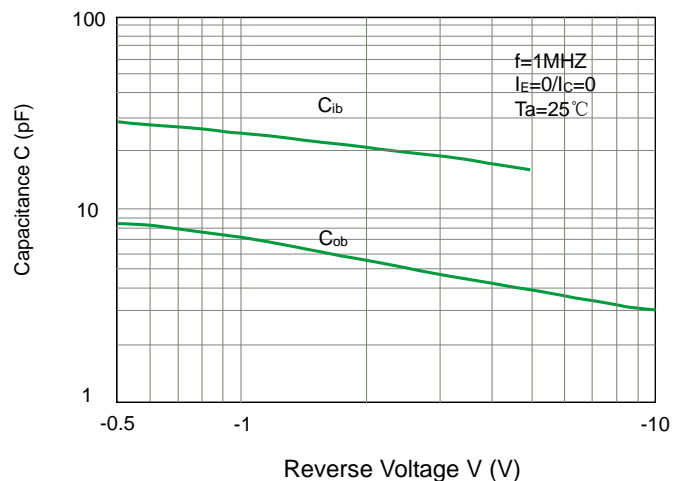


Fig 6. C_{ob}/C_{ib} ---- V_{CB}/V_{EB}

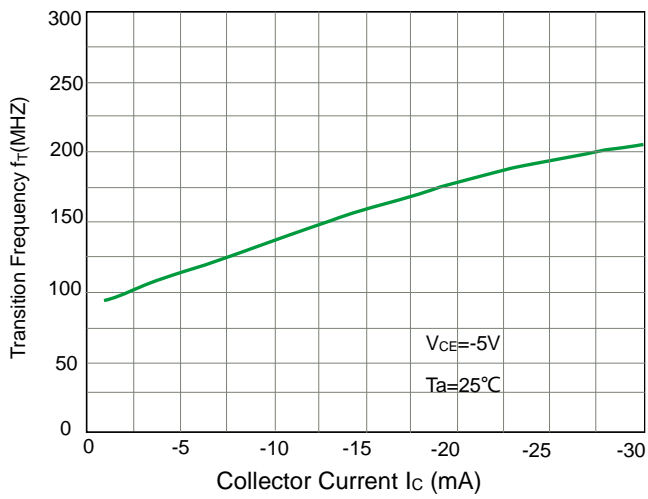


Fig 7. f_T vs I_C

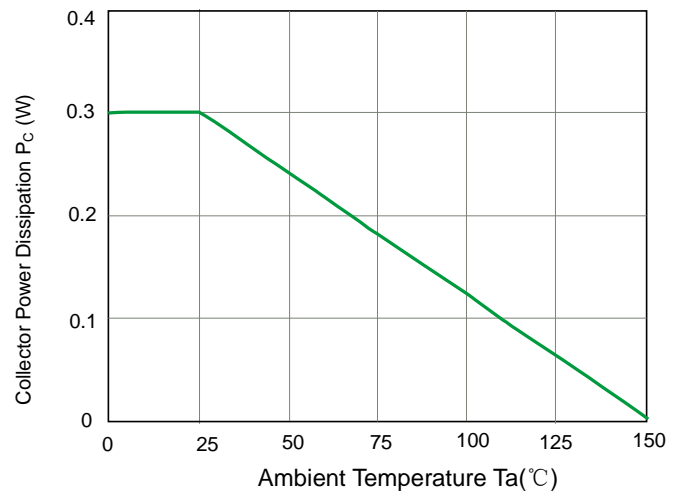
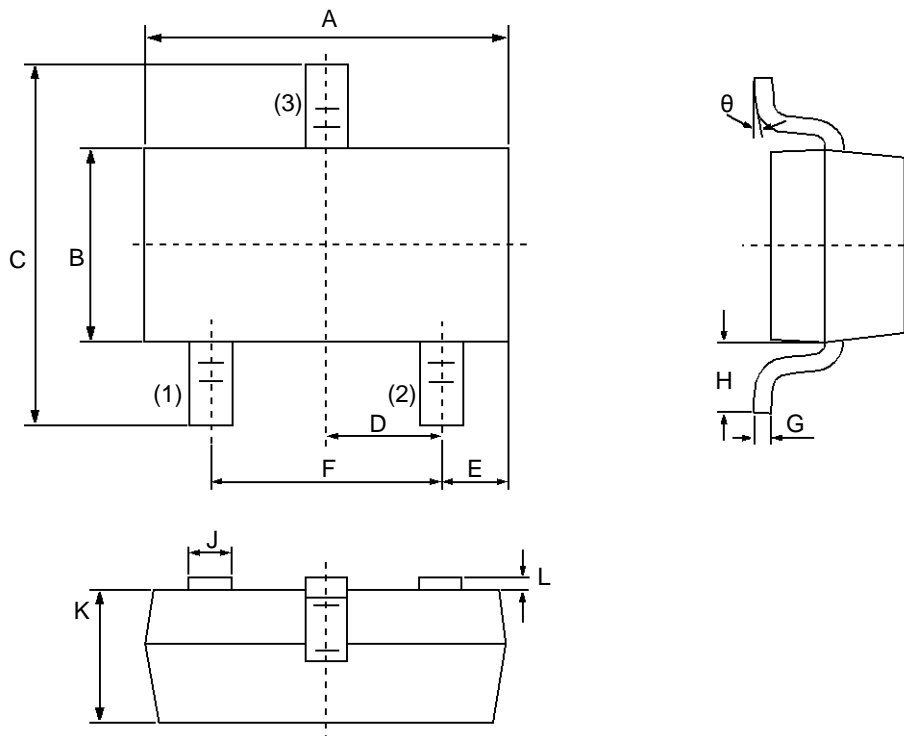
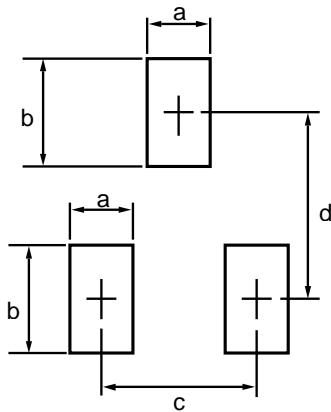


Fig 8. P_C vs T_a

Product dimension(SOT-23)

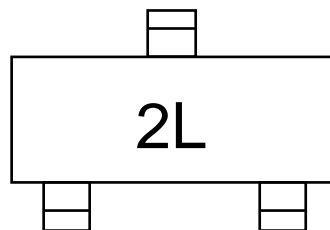


Dim	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	2.80	3.00	0.1102	0.1197
B	1.20	1.40	0.0472	0.0551
C	2.10	2.50	0.0830	0.0984
D	0.89	1.02	0.0350	0.0401
E	0.45	0.60	0.0177	0.0236
F	1.78	2.04	0.0701	0.0807
G	0.085	0.177	0.0034	0.0070
H	0.45	0.60	0.0180	0.0236
J	0.37	0.50	0.0150	0.0200
K	0.89	1.11	0.0350	0.0440
L	0.013	0.100	0.0005	0.0040
θ	0°	10°	0°	10°



Dim	Millimeters	
	MIN	MAX
a	--	0.7
b	--	1.2
c	--	2.04
d	--	2.2


Marking information



Ordering information

Device	Package	Reel	MPQ
PT23T5401	SOT-23 (Pb-Free)	7"	3000 / Tape & Reel

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