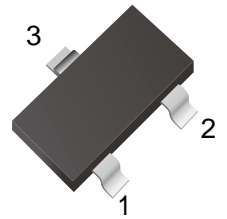


Transistor(PNP)

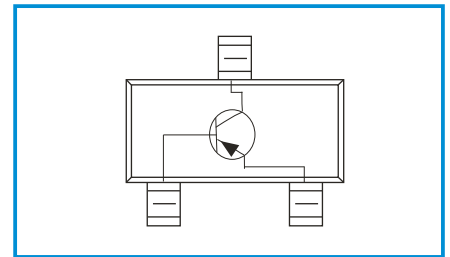
Features

- Complement to LTBTA42
- Power Dissipation of 350mW
- High Stability and High Reliability

1. BASE
2. EMITTER
3. COLLECTOR



Functional Diagram



Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any
- Marking:2D

Maximum Ratings (Ta=25 unless otherwise noted)

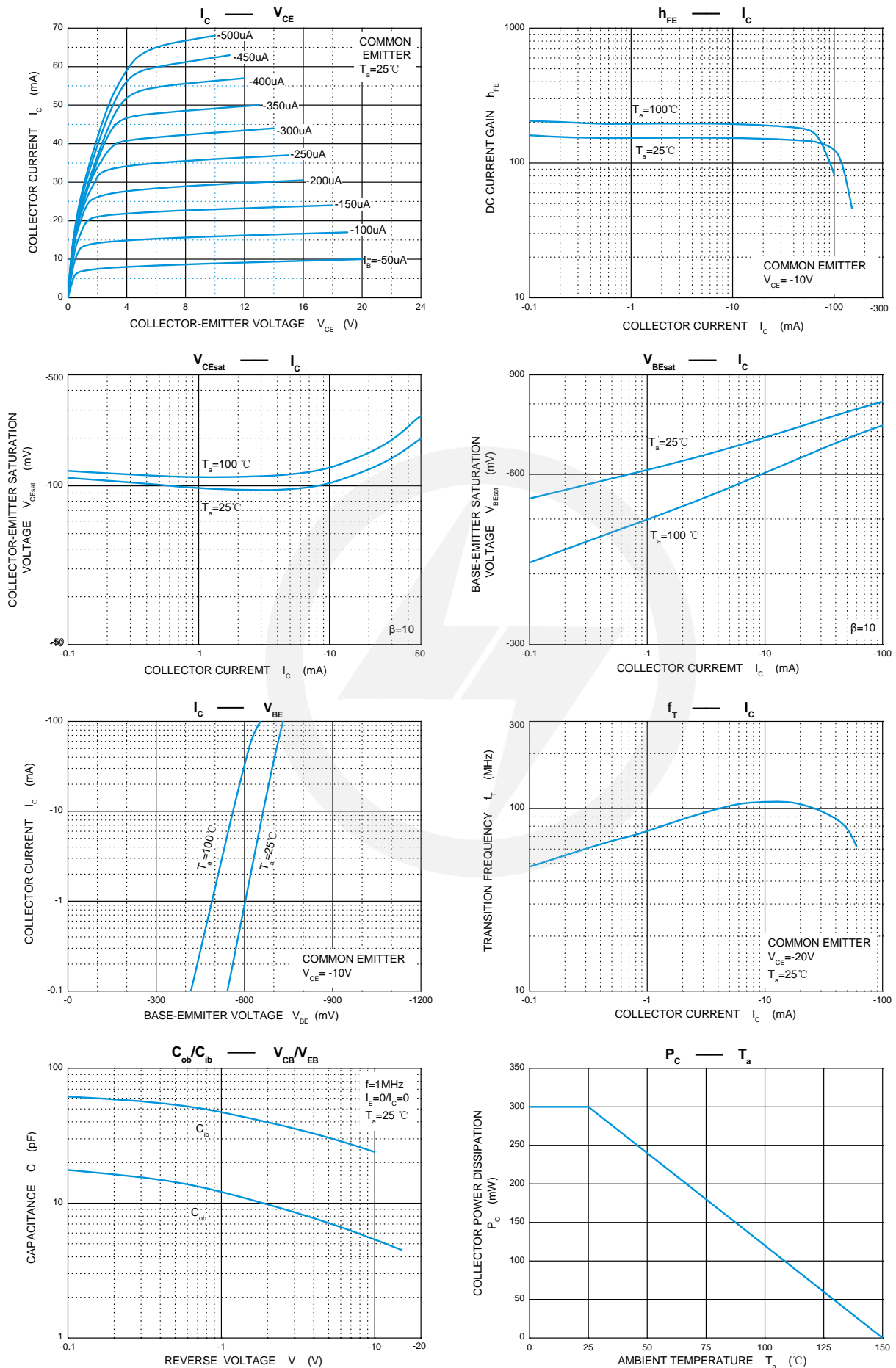
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-300	V
Collector-Emitter Voltage	V _{CEO}	-300	V
Emitter -Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _c	-200	mA
Collector Power Dissipation	P _c	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	417	°C/W

Electrical characteristics (Ta=25 unless otherwise specified)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100uA, I _E =0	-300		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-300		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100uA, I _C =0	-5		V
Collector cut-off current	I _{CBO}	V _{CB} =-200V, I _E =0		-250	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0		-100	nA
DC current gain	h _{FE} (1)*	V _{CE} =-10V, I _C =-1mA	60		
	h _{FE} (2)*	V _{CE} =-10V, I _C =-10mA	100	200	
	h _{FE} (3)*	V _{CE} =-10V, I _C =-30mA	60		
Collector-emitter saturation voltage	V _{CE(sat)} *	I _C =-20mA, I _B =-2mA		-0.20	V
Base -emitter saturation voltage	V _{BE(sat)} *	I _C =-20mA, I _B =-2mA		-0.90	V
Transition frequency	f _T	V _{CE} =-20V, I _C =-10mA; f=30MHz	50		MHz

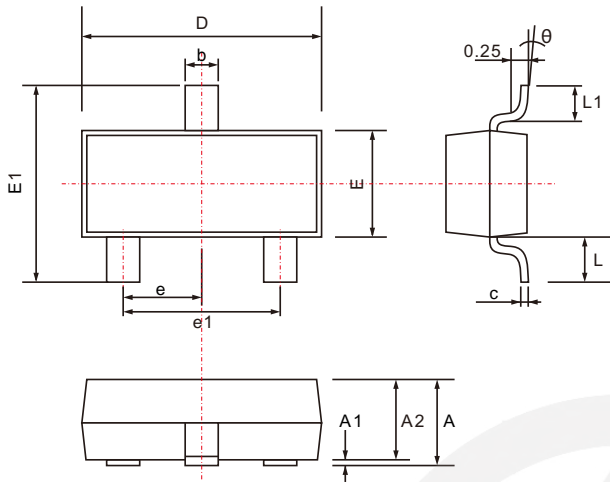
*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%.

Typical Characteristics



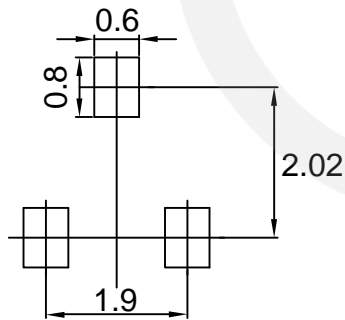
SOT-23 PACKAGE OUTLINE

Unit: mm

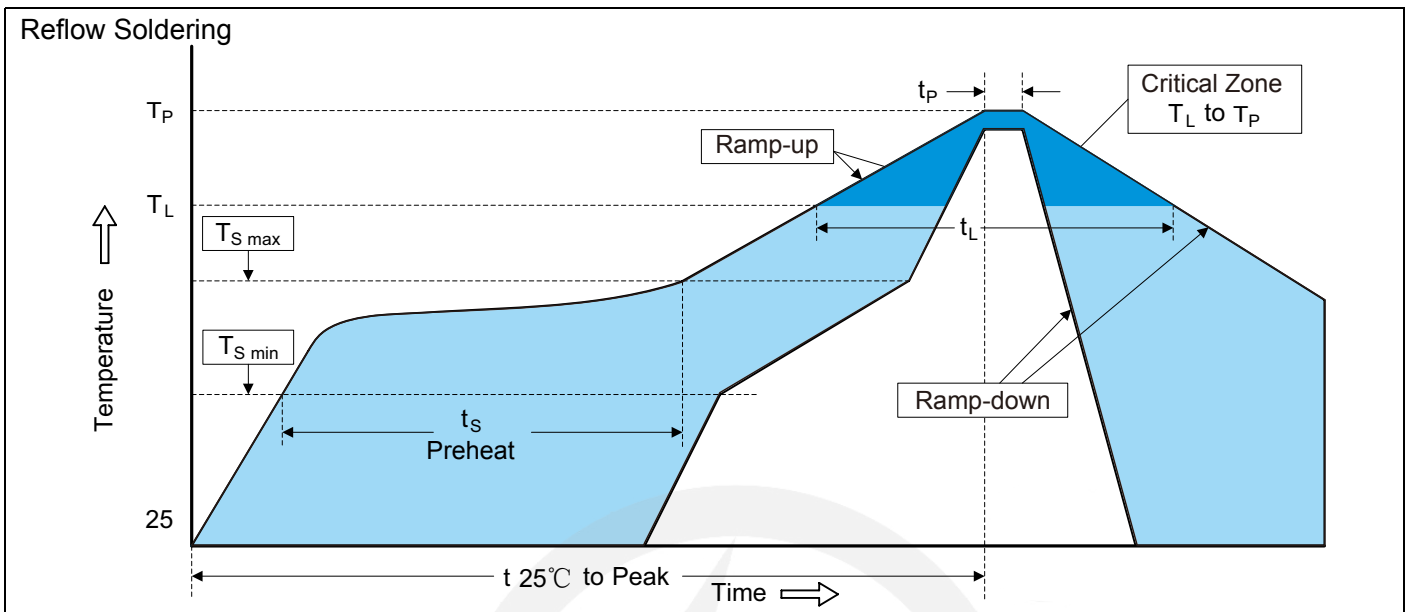


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.200
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.200
D	2.700	3.100
E	1.200	1.400
E1	2.200	3.000
e	0.950 TYP.	
e1	1.750	2.050
L	0.550 TYP.	
L1	0.300	0.500
θ	0°	8°

SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

Recommended Soldering Conditions

Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

7" Reel


D2	$\Phi 178.0 \pm 2.0$
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D3	$\Phi 50.0 \text{ Min.}$
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D4	$\Phi 13.0 \pm 0.5$
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W1	16.0 ± 2.0
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Quantity: 3000PCS