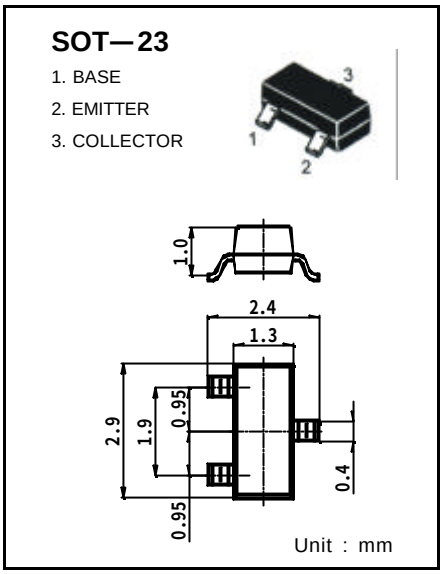
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO.,LTD

SOT-23 Plastic-Encapsulate Transistors

S9013LT1 TRANSISTOR（NPN）



FEATURES

Power dissipation

P_{CM} : 0.3 W（Tamb=25℃）

Collector current

I_{CM} : 0.5 A

Collector-base voltage

$V_{(BR)CBO}$: 40 V

Operating and storage junction temperature range

T_J，T_{stg}: -55℃ to +150

ELECTRICAL CHARACTERISTICS（Tamb=25℃ unless otherwise specified）

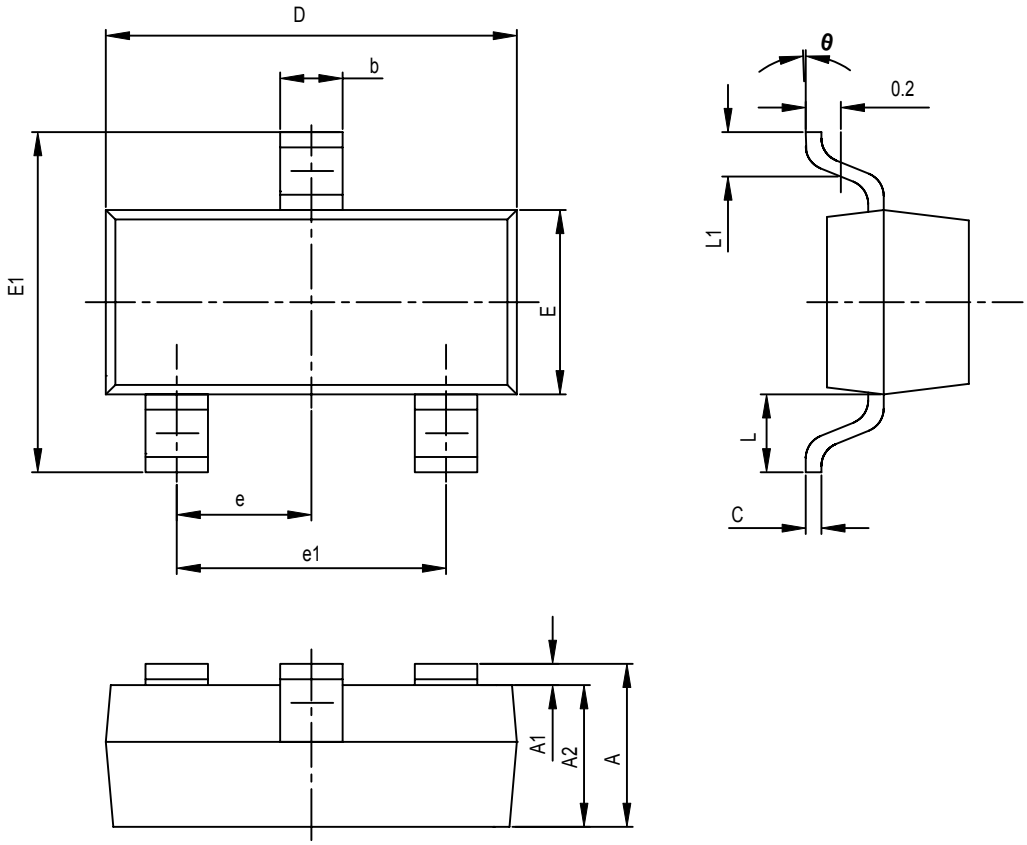
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic= 100μA， I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic= 0.1mA， I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA， I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=40 V， I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=20V， I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V， I_C=0			0.1	μA
DC current gain	$H_{FE(1)}$	V_{CE}=1V， I_C= 50mA	120		350	
	$H_{FE(2)}$	V_{CE}=1V， I_C=500mA	40			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=500 mA, I_B= 50mA			0.6	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=500 mA, I_B= 50mA			1.2	V
Transition frequency	f_T	V_{CE}=6V， Ic= 20mA f=30MHz	150			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	L	H
Range	120-200	200-350

DEVICE MARKING: S9013LT1=J3

SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TPY		0.037TPY	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°