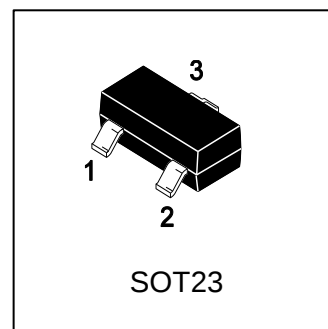


S-L9013QLT1G

General Purpose Transistors NPN Silicon

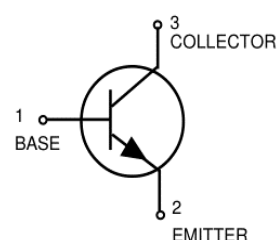
1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-L9013QLT1G	13Q	3000/Tape&Reel



3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	VCEO	25	V
Collector-Base voltage	VCBO	40	V
Emitter-Base Voltage	VEBO	5	V
Collector current-continuoun	IC	500	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C	PD	225 1.8	mW mW/°C
Thermal Resistance, Junction-to-Ambient	RθJA	556	°C/W
Total Device Dissipation, Alumina Substrate, (Note 2)@ TA = 25°C Derate above 25°C	PD	300 2.4	mW mW/°C
Thermal Resistance, Junction-to-Ambient	RθJA	417	°C/W
Junction and Storage temperature	TJ,Tstg	-55~+150	°C

1. FR-5 = 1.0×0.75×0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

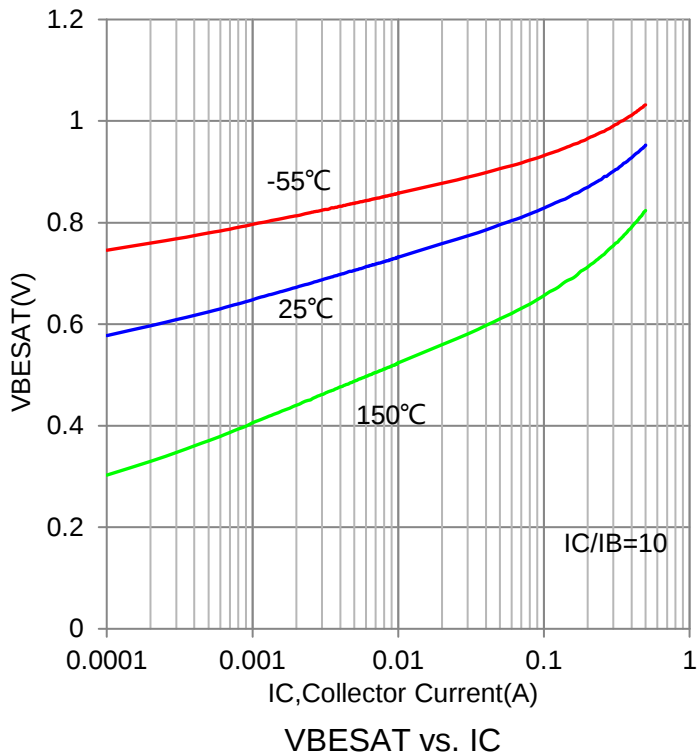
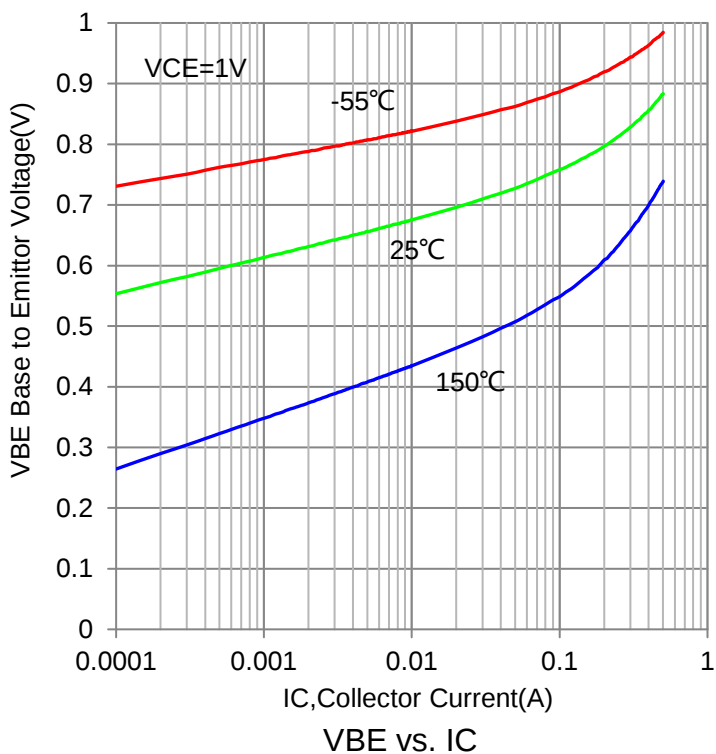
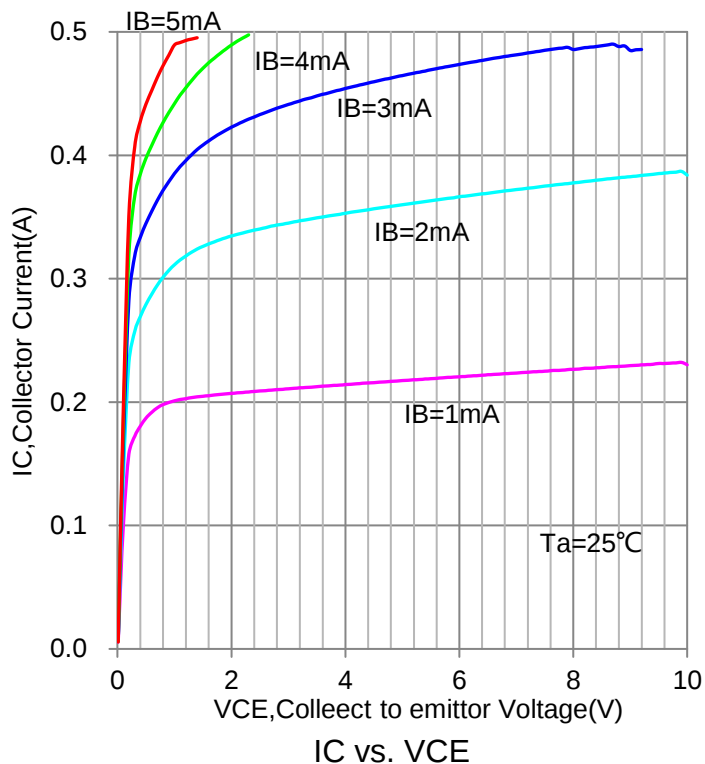
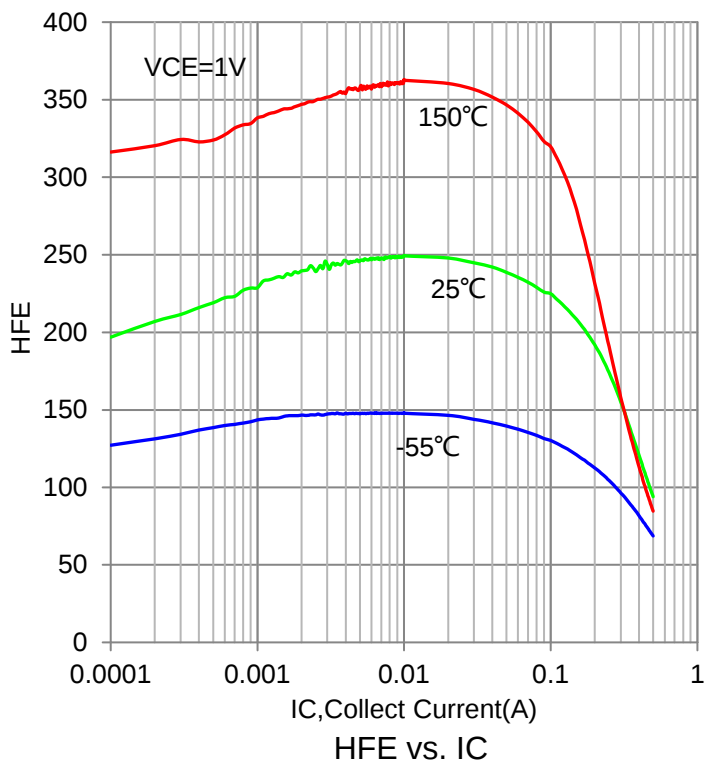
OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector-Emitter Breakdown Voltage (IC =1.0mA)	V(BR)CEO	25	-	-	V
Emitter-Base Breakdown Voltage (IE = 100μA)	V(BR)EBO	5	-	-	V
Collector-Base Breakdown voltage (IC = 100μA)	V(BR)CBO	40	-	-	V
Collector Cutoff Current (VCB = 35 V)	ICBO	-	-	150	nA
Emitter Cutoff Current (VEB = 4V)	IEBO	-	-	150	nA

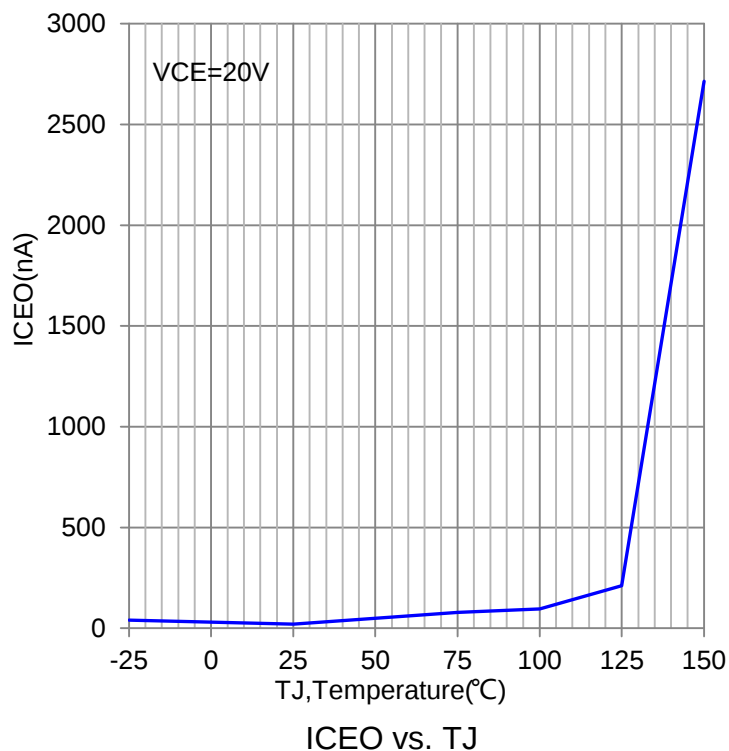
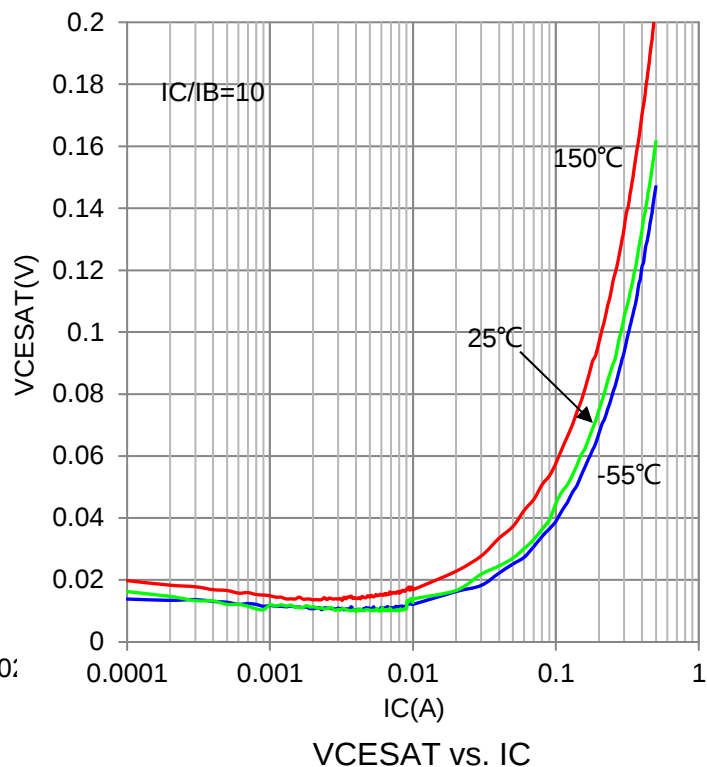
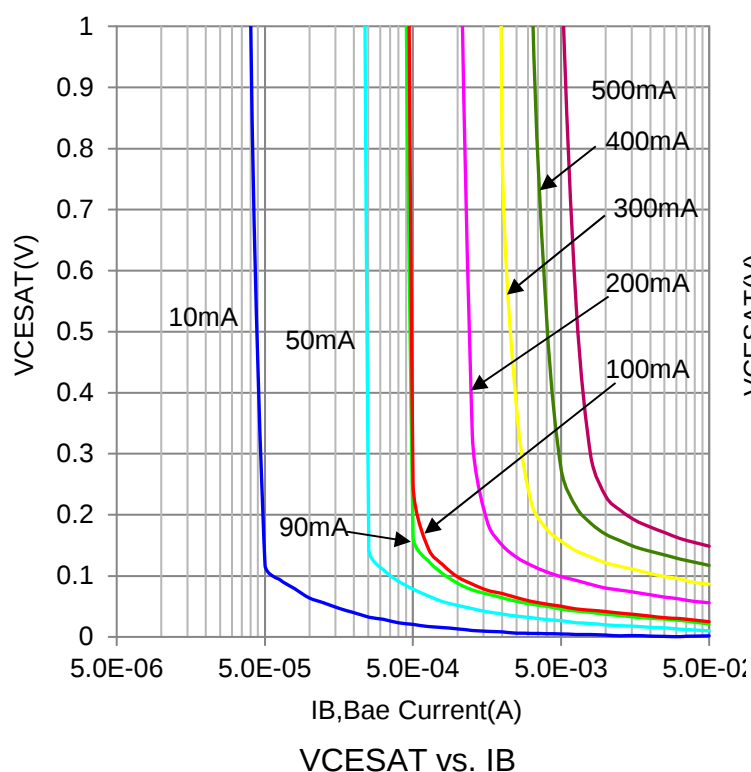
ON CHARACTERISTICS

DC Current Gain (IC =50mA, VCE =1V)	HFE	150	-	300	
Collector-Emitter Saturation Voltage (IC =500mA, IB =50mA)	VCE(S)	-	-	0.6	V

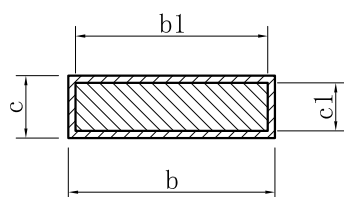
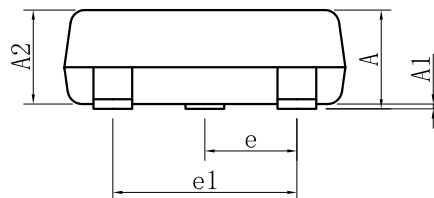
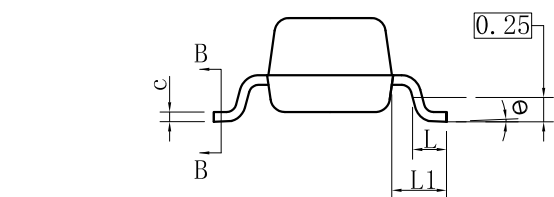
6. ELECTRICAL CHARACTERISTICS CURVES



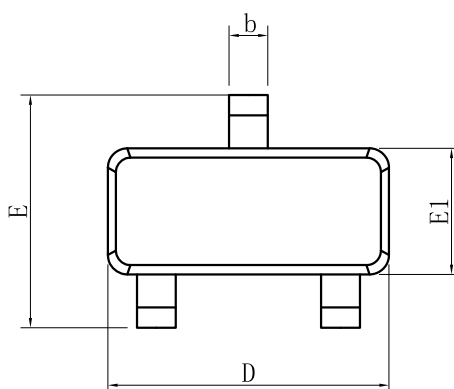
6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7.OUTLINE AND DIMENSIONS



SECTION B-B

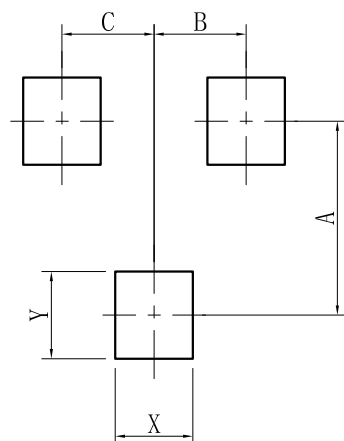


SOT23			
DIM	MIN	NOR	MAX
A	0.89	—	1.12
A1	0.01	—	0.10
A2	0.88	0.95	1.02
b	0.30	—	0.50
b1	0.30	0.40	0.45
c	0.08	—	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	—	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	—	8°
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish $Ra0.4\pm0.2\mu m$
- 2.Bottom package surface finish $Ra0.7\pm0.2\mu m$
- 3.Side package surface finish $Ra0.4\pm0.2\mu m$

8.SOLDERING FOOTPRINT



SOT-23	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
- Before you use our Products for new Project, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.