

L8050QLT1G

S-L8050QLT1G

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.
- High current capacity in compact package.
- Epitaxial planar type.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
L8050QLT1G	1YC	3000/Tape&Reel
L8050QLT3G	1YC	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

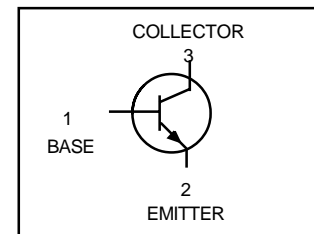
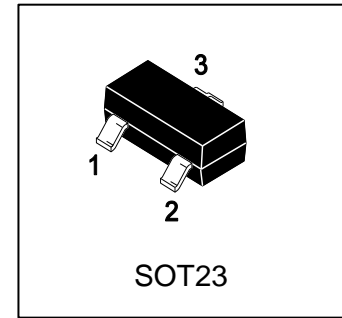
Parameter	Symbol	Limits	Unit
Collector-Emitter Voltage	VCEO	25	V
Collector-Base voltage	VCBO	40	V
Emitter-Base Voltage	VEBO	5	V
Collector current	IC	800	mA

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)

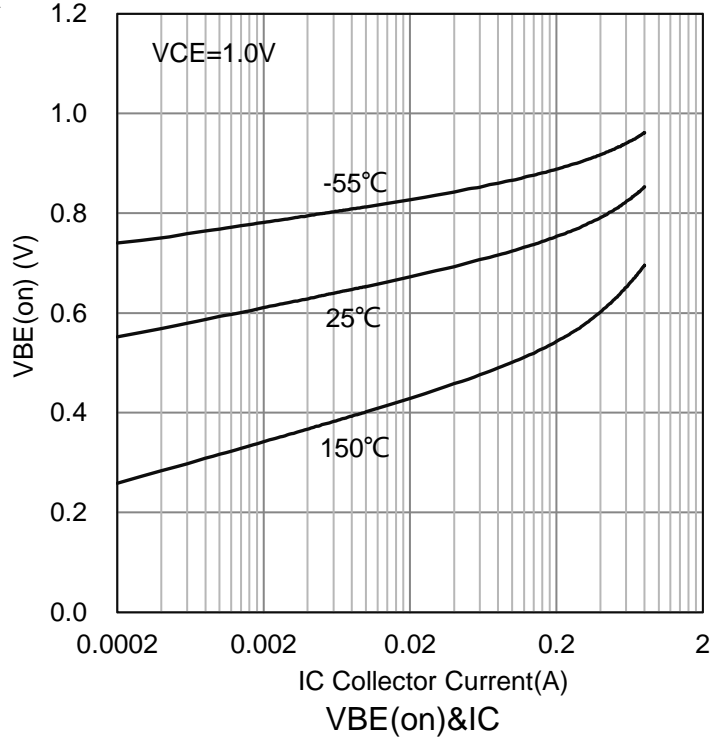
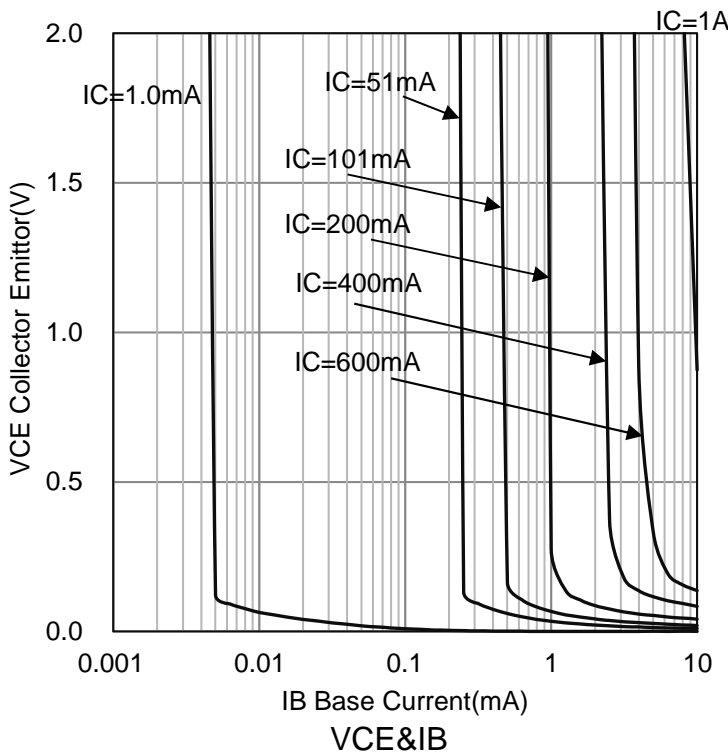
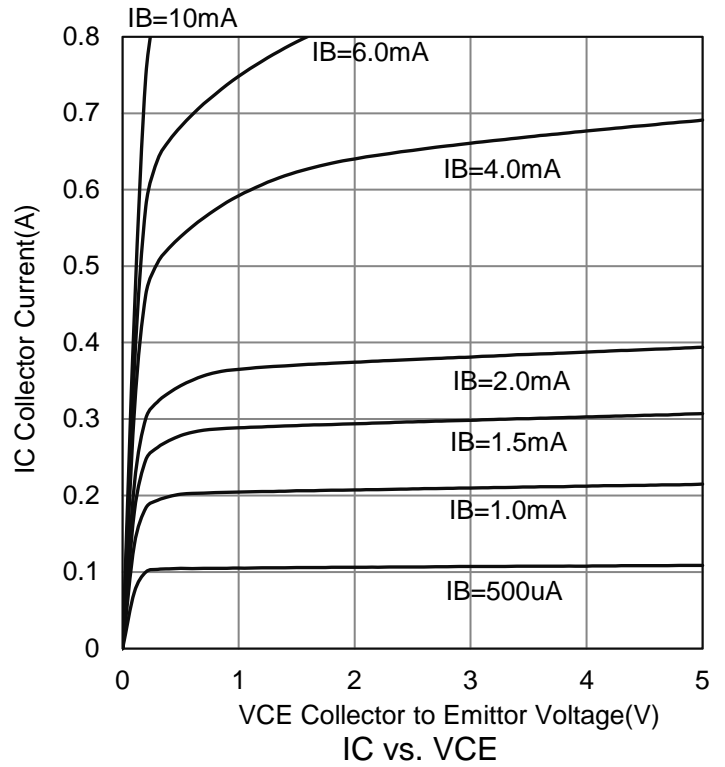
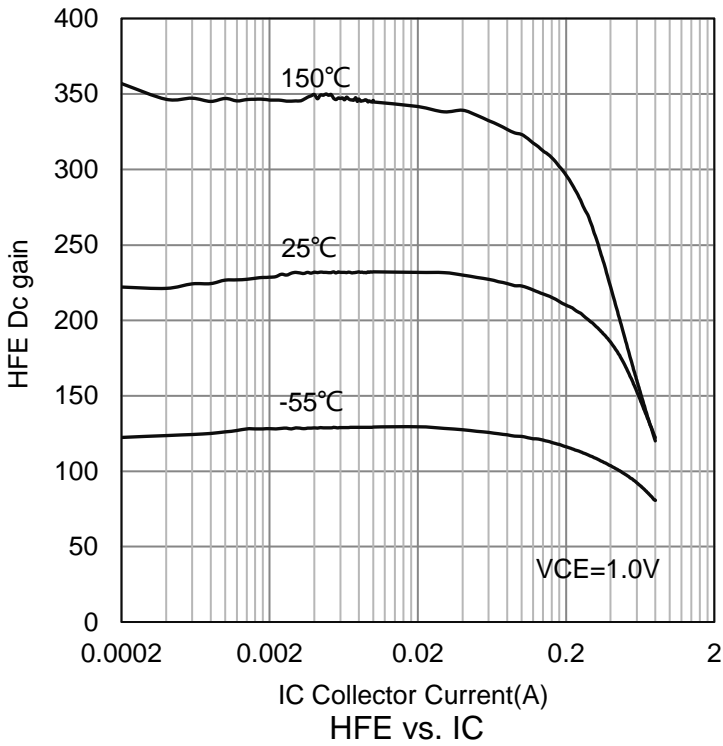
OFF CHARACTERISTICS

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
Collector-Emitter cutoff Current (VCE = 25V, IB=0)	ICEO	-	-	10	μA

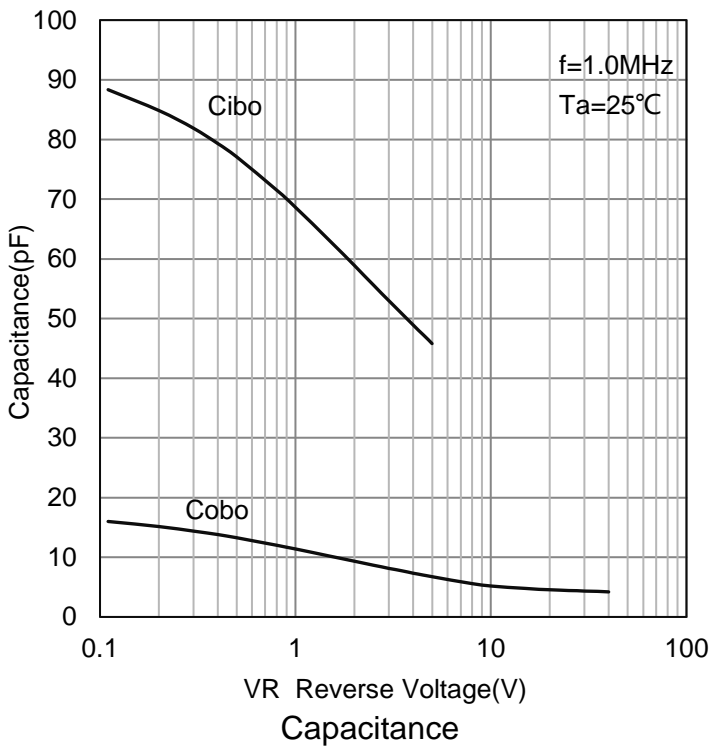
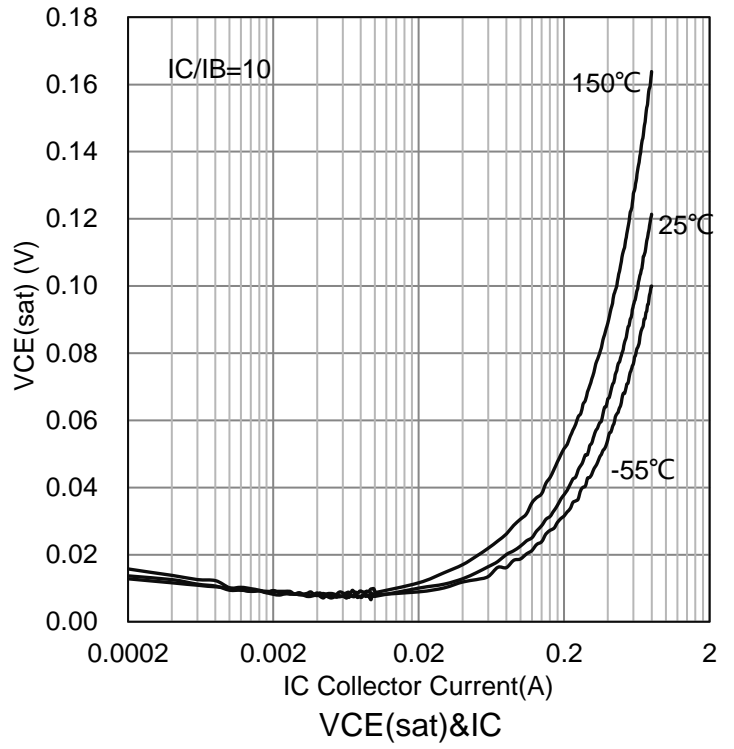
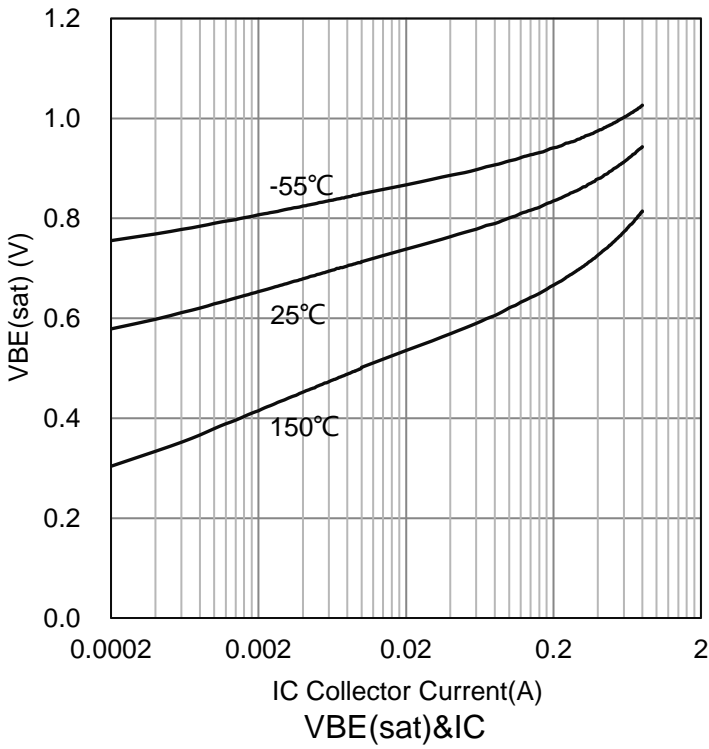
ON CHARACTERISTICS

DC Current Gain (IC =100mA, VCE =1V)	HFE	150	-	300	
Collector-Emitter Saturation Voltage (IC =800mA, IB =80mA)	VCE(S)	-	-	0.5	V
Base-Emitter Saturation Voltage (IC =800mA, IB =80mA)	VBE(S)	-	-	1.2	V
Base-Emitter On Voltage (VCE =1.0 V, IC =10mA)	VBE(on)	-	0.66	1	V

6.ELECTRICAL CHARACTERISTICS CURVES



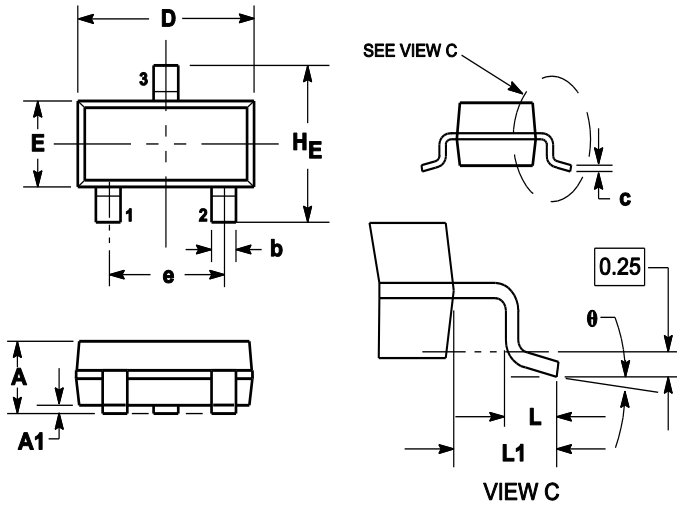
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

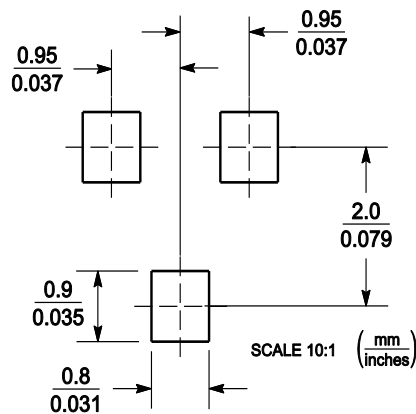
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

8. SOLDERING FOOTPRINT



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.
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