

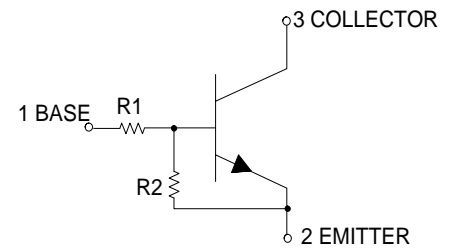
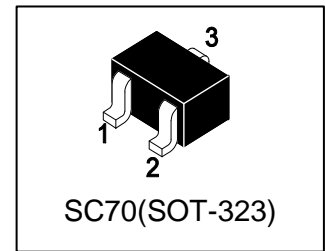
LMUN5213T1G

S-LMUN5213T1G

Bias Resistor Transistor
NPN Silicon Surface Mount Transistor
with Monolithic Bias Resistor Network

1. FEATURES

- Simplifies circuit design
- Reduces board space and component count
- The SC-70/SOT-323 package can be soldered using wave or reflow.
- The modified gull-winged leads absorb thermal stress during soldering eliminating the possibility of damage to the die.
- 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 RESISTOR VALUES

Device	Marking	R1(K)	R2(K)	Shipping
LMUN5213T1G	8C	47	47	3000/Tape&Reel
LMUN5213T3G	8C	47	47	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	V _{CEO}	50	V
Collector–Base Voltage	V _{CBO}	50	V
Collector Current — Continuous	I _C	100	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C	PD	202 1.6	mW mW/°C
Thermal Resistance, Junction–to–Ambient(Note 1)	R _{θJA}	618	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

1. FR-5 @ Minimum Pad.

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

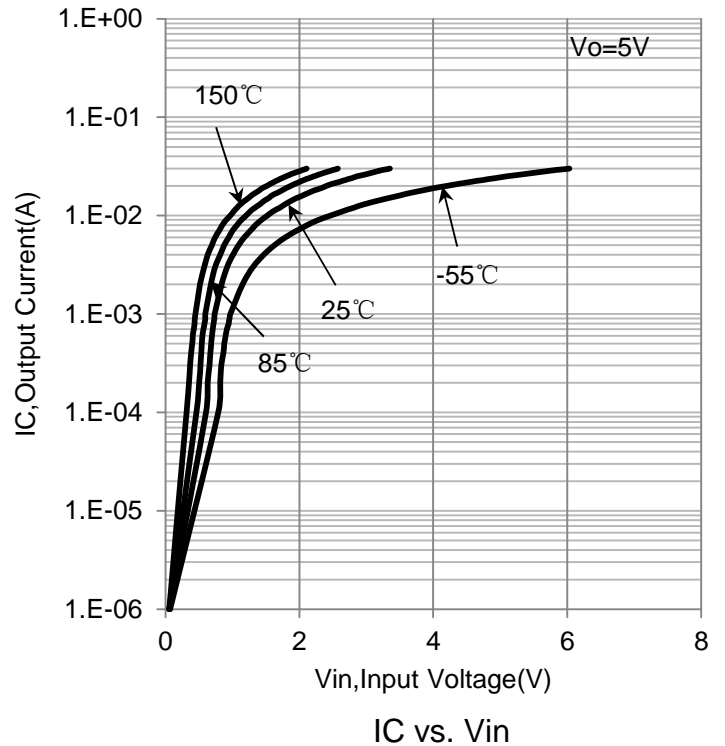
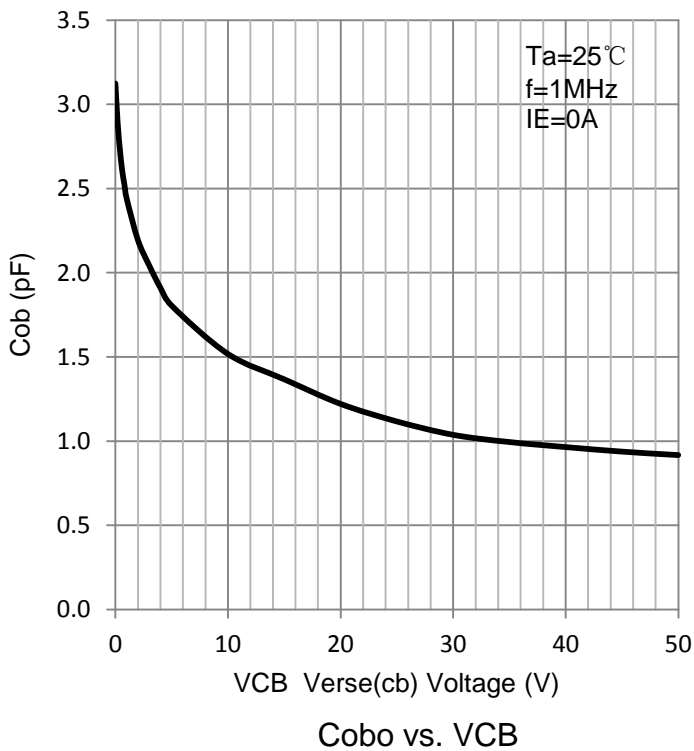
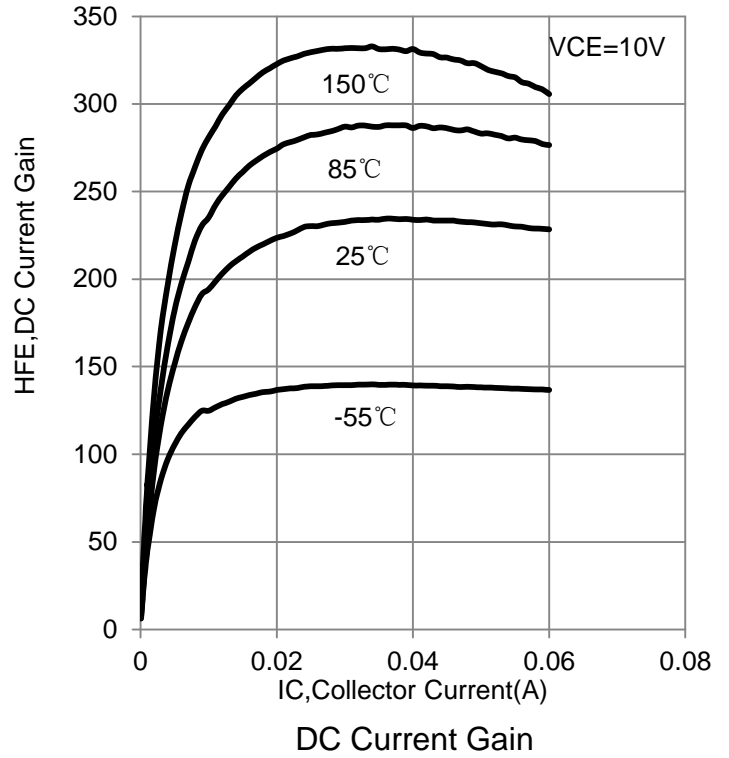
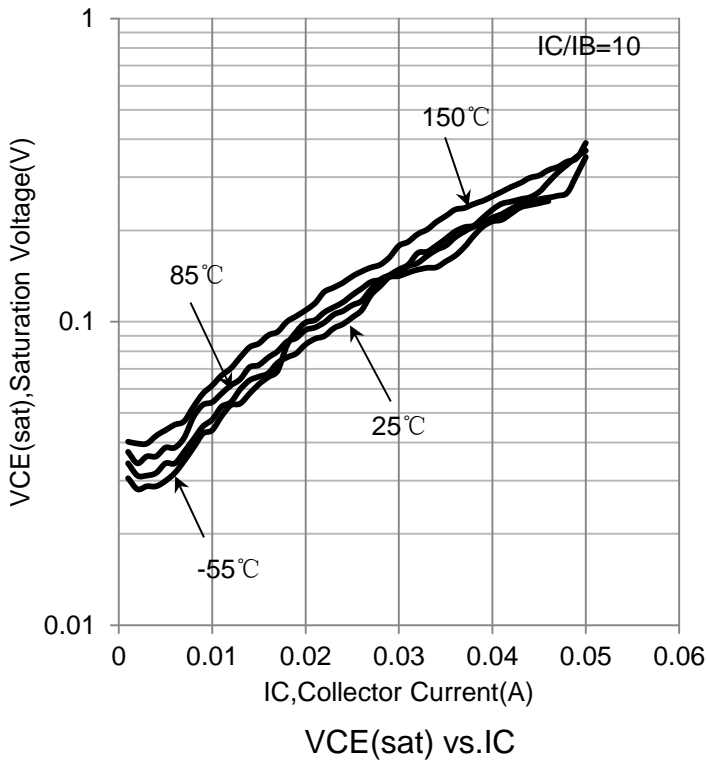
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = 2.0 mA, IB = 0)	VBR(CEO)	50	-	-	V
Collector–Base Breakdown Voltage (IC = 10 μA, IE = 0)	VBR(CBO)	50	-	-	V
Collector-Base Cutoff Current (VCB = 50 V, IE = 0)	ICBO	-	-	100	nA
Collector-Emitter Cutoff Current (VCE = 50 V, IB = 0)	ICEO	-	-	500	nA
Emitter-Base Cutoff Current (VEB = 6.0 V, IC = 0)	IEBO	-	-	0.1	mA

ON CHARACTERISTICS (Note 2.)

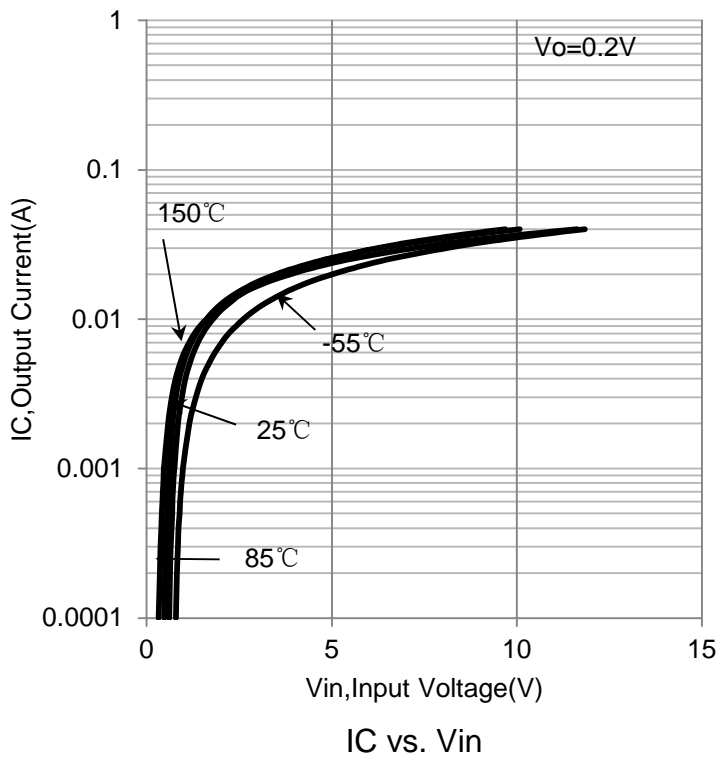
DC Current Gain (IC = 5.0 mA, VCE = 10 V)	HFE	80	140	320	
Collector–Emitter Saturation Voltage (IC = 10 mA, IB = 0.3 mA)	VCE(sat)	-	-	0.25	V
Output Voltage (on) (VCC = 5.0 V, VB = 3.5 V, RL = 1.0KΩ)	VOL	-	-	0.2	V
Output Voltage (on) (VCC = 5.0 V, VB = 0.5 V, RL = 1.0KΩ)	VOH	4.9	-	-	V
Input Resistor	R1	32.9	47	61.1	KΩ
Resistor Ratio	R1/R2	0.8	1	1.2	

2. Pulse Test: Pulse Width < 300 μs, Duty Cycle < 2.0%

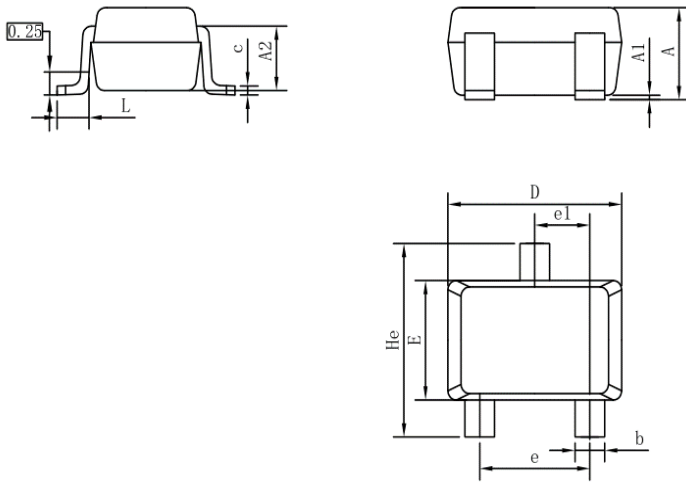
6. ELECTRICAL CHARACTERISTICS CURVES



6. ELECTRICAL CHARACTERISTICS CURVES(Con.)

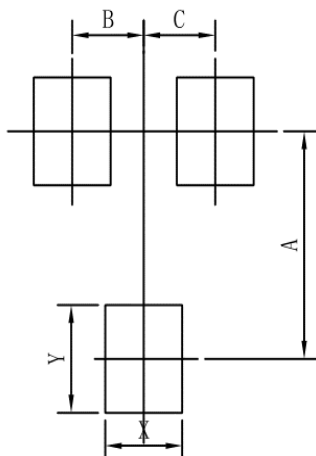


7.OUTLINE AND DIMENSIONS



SC70			
DIM	MIN	NOR	MAX
A	0.80	0.95	1.00
A1	0.00	0.05	0.10
A2	0.7 REF		
b	0.30	0.35	0.40
c	0.10	0.15	0.25
D	1.80	2.05	2.20
E	1.15	1.30	1.35
e	1.20	1.30	1.40
e1	0.65 BSC		
L	0.20	0.35	0.56
He	2.00	2.10	2.40
ALL Dimension in mm			

8.SOLDERING FOOTPRINT



SC70	
DIM	MIN
A	1.90
B	0.65
C	0.65
X	0.70
Y	0.90