

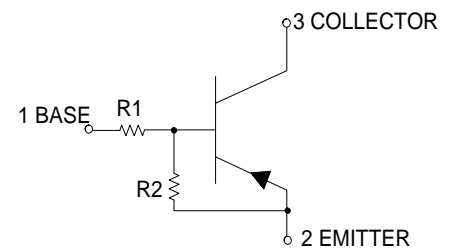
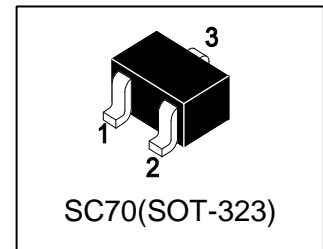
# LMUN5111T1G

## S-LMUN5111T1G

Bias Resistor Transistor  
PNP 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
LMUN5111T1G	6A	10	10	3000/Tape&Reel
LMUN5111T3G	6A	10	10	10000/Tape&Reel

### 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	V <sub>CEO</sub>	-50	V
Collector–Base Voltage	V <sub>CBO</sub>	-50	V
Collector Current — Continuous	I <sub>C</sub>	-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 <sub>θJA</sub>	618	°C/W
Junction and Storage temperature	T <sub>J</sub> , T <sub>stg</sub>	-55~+150	°C

1. FR-5 @ Minimum Pad.

**5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

## OFF CHARACTERISTICS

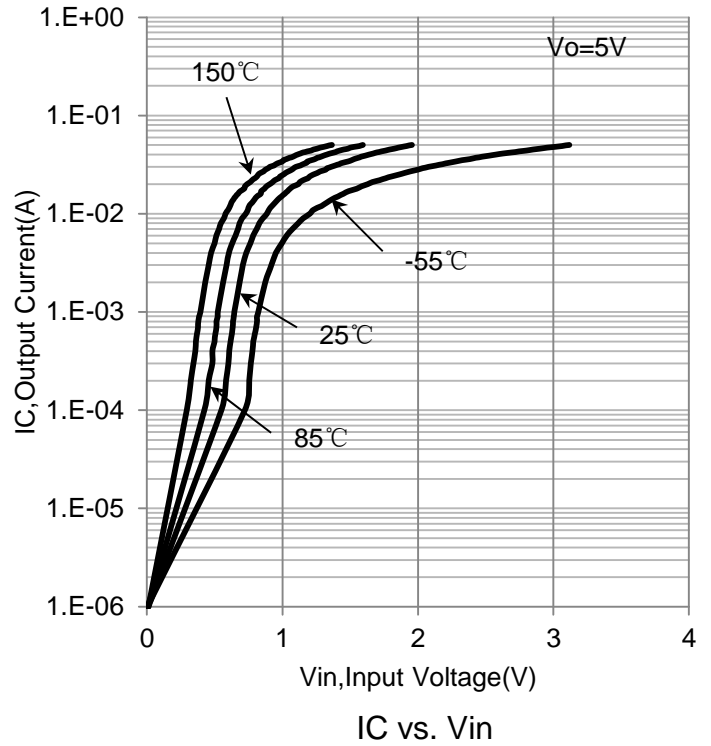
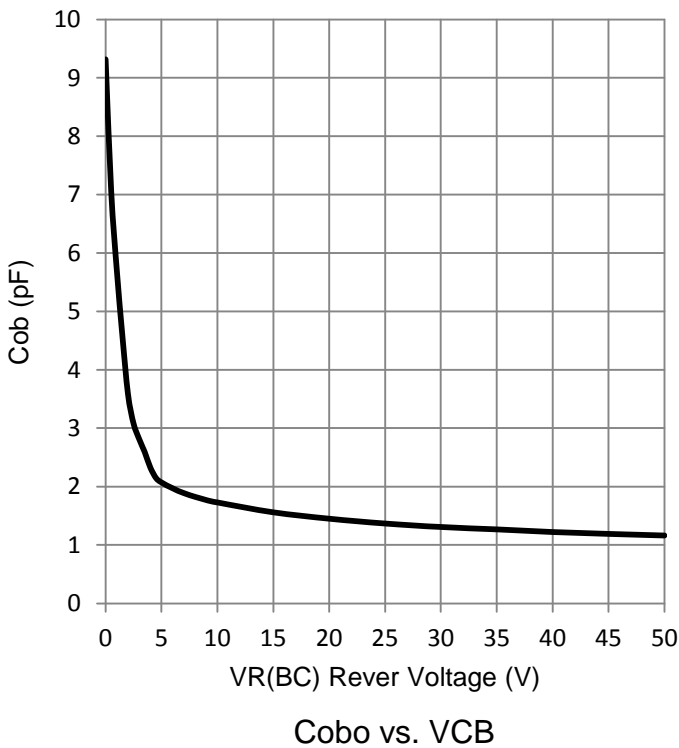
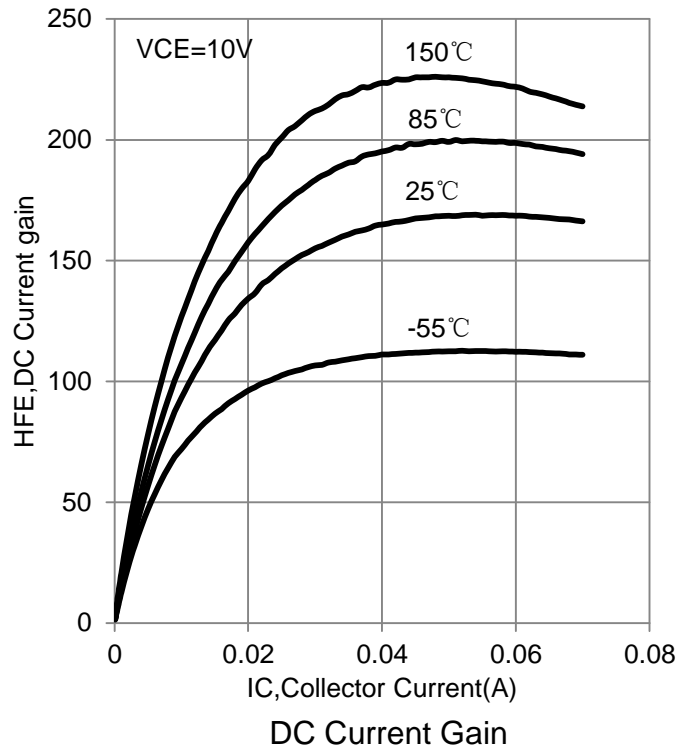
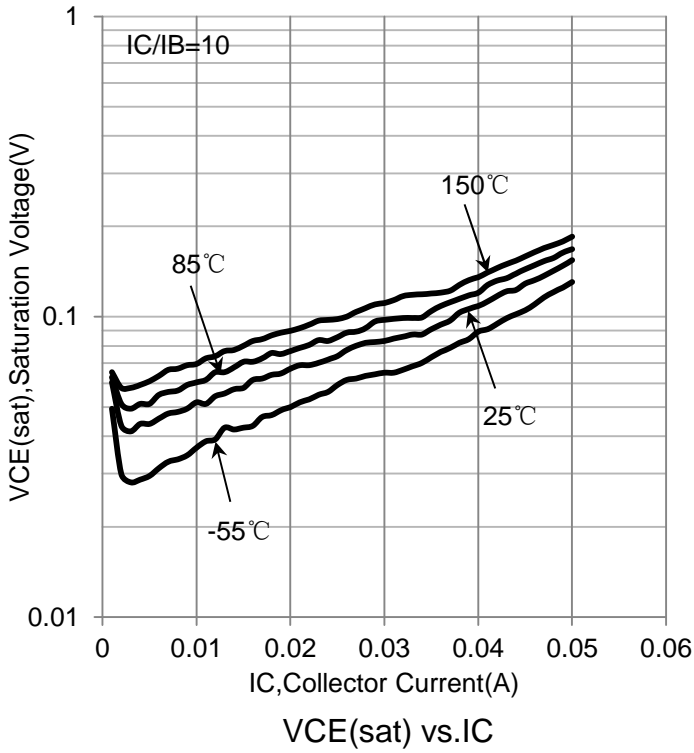
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = -2.0 mA, IB = 0)	VBR(CEO)	-50	-	-	V
Collector–Base Breakdown Voltage (IC = -10 μA, IE = 0)	VBR(CBO)	-50	-	-	V
Collector-Base Cutoff Current (VCB = -50 V, IE = 0)	ICBO	-	-	-100	nA
Collector-Emitter Cutoff Current (VCE = -50 V, IB = 0)	ICEO	-	-	-500	nA
Emitter-Base Cutoff Current (VEB = -6.0 V, IC = 0)	IEBO	-	-	-0.5	mA

## ON CHARACTERISTICS (Note 2.)

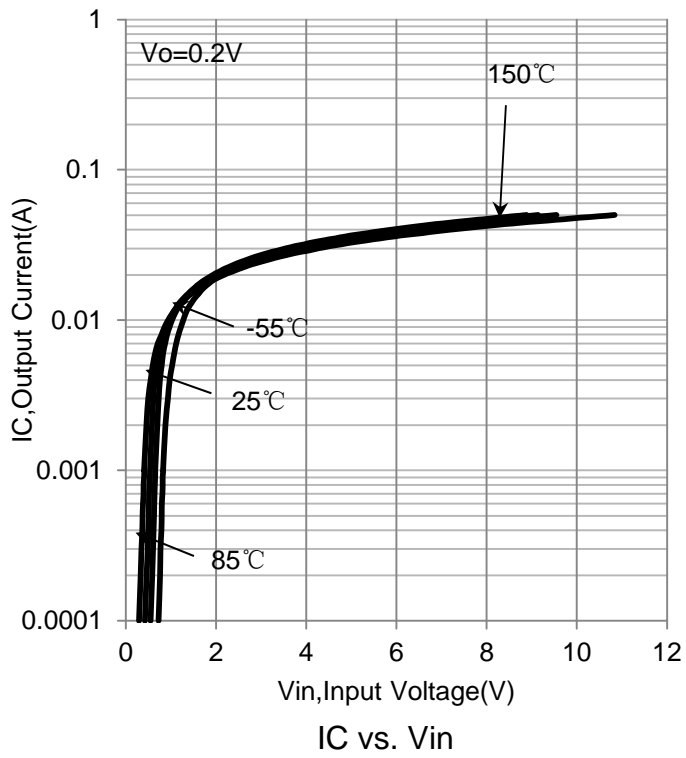
DC Current Gain (IC = -5.0 mA, VCE = -10 V)	HFE	35	60	250	
Collector–Emitter Saturation Voltage (IC = -10 mA, IB = -0.3 mA)	VCE(sat)	-	-	-0.25	V
Output Voltage (on) (VCC = -5.0 V, VB = -2.5 V, RL = 1.0KΩ)	VOL	-	-	-0.2	V
Output Voltage (on) (VCC = -5.0 V, VB = -0.5 V, RL = 1.0KΩ)	VOH	-4.9	-	-	V
Input Resistor	R1	7	10	13	KΩ
Resistor Ratio	R1/R2	0.8	1	1.2	

2. Pulse Test: Pulse Width &lt; 300 μs, Duty Cycle &lt; 2.0%

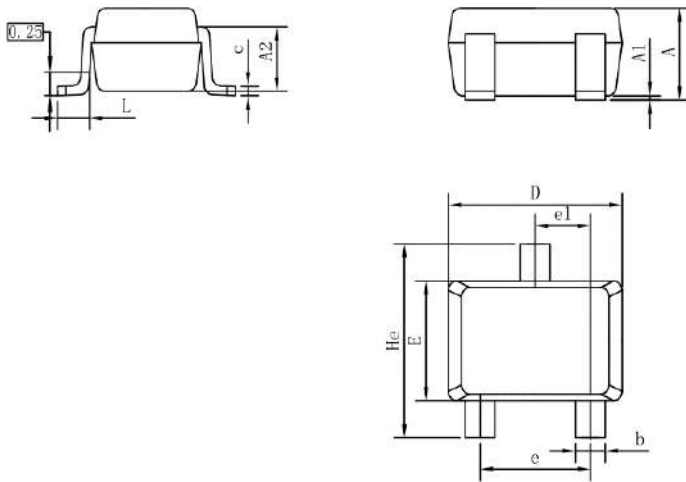
**6. ELECTRICAL CHARACTERISTICS CURVES**



### 6. ELECTRICAL CHARACTERISTICS CURVES(Con.)

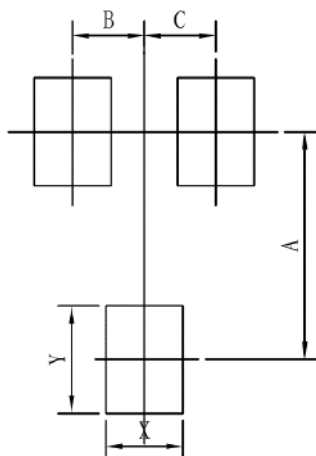


### 7.OUTLINE AND DIMENSIONS



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

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