

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

● FEATURES

- 1)Simplifies Circuit Design
- 2)Reduces Board Space and Component Count
- 3)We declare that the material of product compliant with RoHS requirements and Halogen Free.
- 4)S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

● DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LMUN2114LT1G	A6D	3000/Tape&Reel
LMUN2114LT3G	A6D	10000/Tape&Reel

● MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	50	V
Collector-Emitter Voltage	VCEO	50	V
Collector Current	IC	100	mA
Total Power Dissipation @ Ta = 25°C(Note 1.) Derate above 25°C	PD	246 1.5	mW °C/W

● THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance – Junction-to-Ambient (Note 1.)	R θ JA	508	°C/W
Operating and Storage Temperature Range	Topr, Tstg	-55 to +150	°C
Maximum Temperature for Soldering Purposes, Time in Solder Bath	TL	260 10	°C Sec

● ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-Base Cutoff Current	ICBO	-	-	100	nA	V _{CB} = 50 V, I _E = 0
Collector-Emitter Cutoff Current	ICEO	-	-	500	nA	V _{CE} = 50 V, I _B = 0
Emitter-Base Cutoff Current	IEBO	-	-	0.2	mA	V _{EB} = 6.0 V, I _C = 0
Collector-Base Breakdown Voltage	V(BR)CBO	50	-	-	V	I _C = 10 μ A, I _E = 0
Collector-Emitter Breakdown Voltage	V(BR)CEO	50	-	-	V	I _C = 2.0 mA, I _B = 0

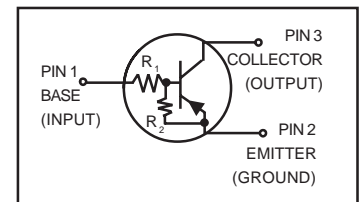
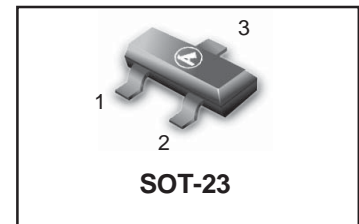
ON CHARACTERISTICS(Note2.)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
DC Current Gain	hFE	80	140	-	-	V _{CE} = 10 V, I _C = 5.0 mA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	-	-	0.25	V	I _C = 10 mA, I _B = 0.3 mA
Output Voltage (on)	V _{OL}	-	-	0.2	V	V _{CC} = 5.0 V, V _B = 2.5 V, R _L = 1.0 k Ω
Output Voltage (off)	V _{OH}	4.9	-	-	V	V _{CC} = 5.0 V, V _B = 0.5 V, R _L = 1.0 k Ω
Input Resistor	R1	7	10	13	k Ω	
Resistor Ratio	R1/R2	0.17	0.21	0.25		

1. Device mounted on a FR-4 glass epoxy printed circuit board using the minimum recommended footprint

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

LMUN2114LT1G S-LMUN2114LT1G



LMUN2114LT1G,S-LMUN2114LT1G

ELECTRICAL CHARACTERISTIC CURVES

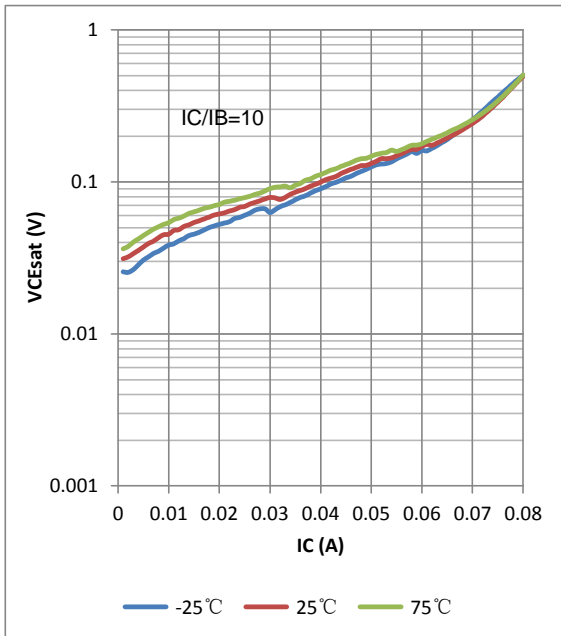


Figure 1. Collector Emitter Saturation Voltage vs. Collector Current

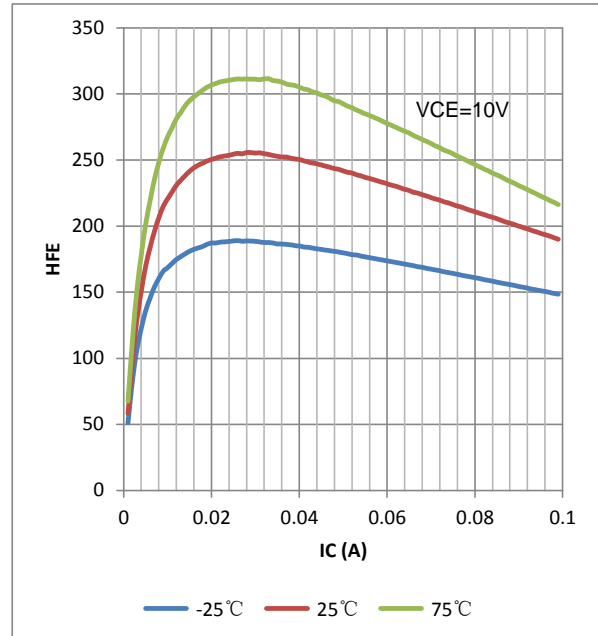


Figure 2. DC Current Gain

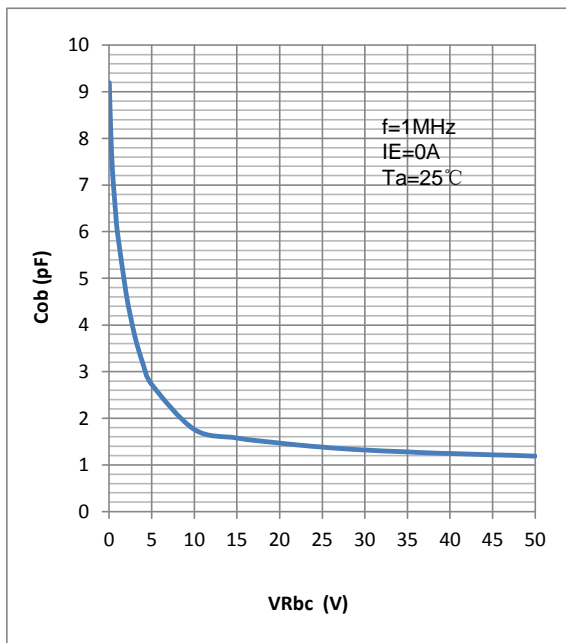


Figure 3. Output Capacitance

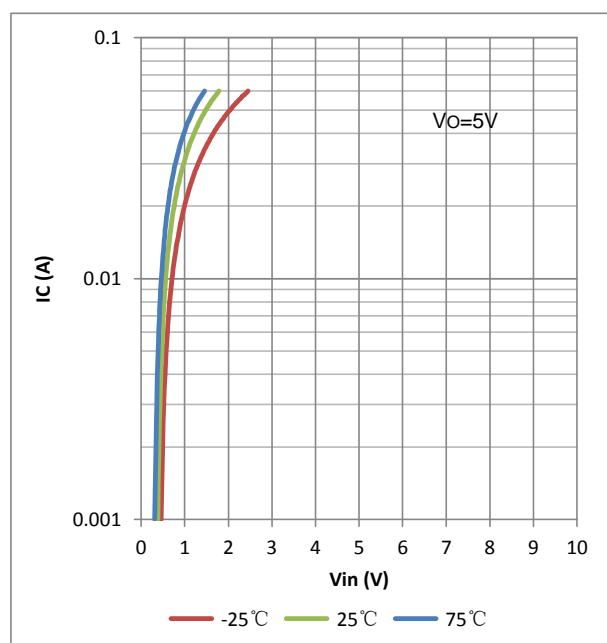


Figure 4. Output Current vs. Input Voltage

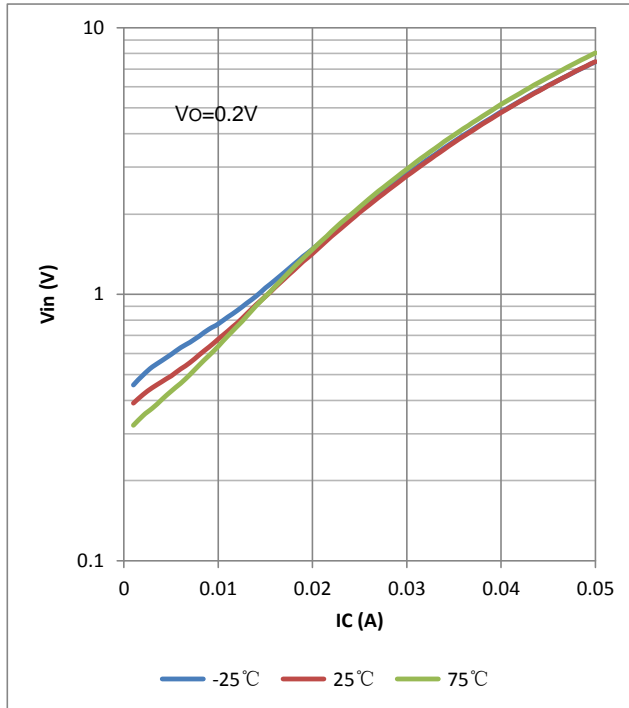
LMUN2114LT1G,S-LMUN2114LT1G**ELECTRICAL CHARACTERISTIC CURVES**

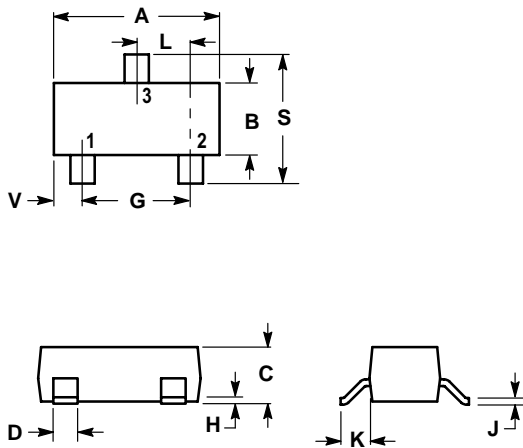
Figure 5. Input Voltage vs. Output Current

LMUN2114LT1G,S-LMUN2114LT1G

SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

