

Bias Resistor Transistor NPN 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
LMUN2238LT1G	A8R	3000/Tape&Reel
LMUN2238LT3G	A8R	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	TO, Tstg	-55 to +150	°C
Maximum Temperature for Soldering Purposes, Time in Solder Bath	TL	260 10	°C Sec

●ELECTRICAL CHARACTERISTICS (Ta= 25°C)

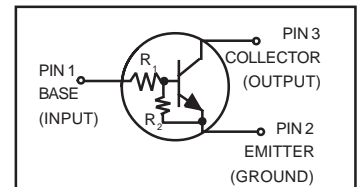
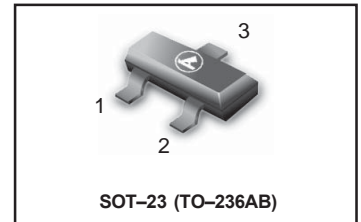
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-Base Cutoff Current	ICBO	–	–	100	nA	VCB = 50 V, IE = 0
Collector-Emitter Cutoff Current	ICEO	–	–	500	nA	VCE = 50 V, IB = 0
Emitter-Base Cutoff Current	IEBO	–	–	4	mA	VEB = 6.0 V, IC = 0
Collector-Base Breakdown Voltage	V(BR)CBO	50	–	–	V	IC = 10 μ A, IE = 0
Collector-Emitter Breakdown Voltage	V(BR)CEO	50	–	–	V	IC = 2.0 mA, IB = 0

ON CHARACTERISTICS (Note 2.)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
DC Current Gain	hFE	160	350	–		VCE = 10 V, IC = 5.0mA
Collector-Emitter Saturation Voltage	VCE(sat)	–	–	0.25	V	IC = 10 mA, IB = 1 mA
Output Voltage (on)	VOL	–	–	0.2	V	VCC = 5.0 V, VB = 2.5 V, RL = 1.0 k Ω
Output Voltage (off)	VOH	4.9	–	–	V	VCC = 5.0 V, VB = 0.25 V, RL = 1.0 k Ω
Input Resistor	R1	1.54	2.2	2.88	k Ω	

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%.

LMUN2238LT1G S-LMUN2238LT1G



LMUN2238LT1G,S-LMUN2238LT1G

ELECTRICAL CHARACTERISTIC CURVES

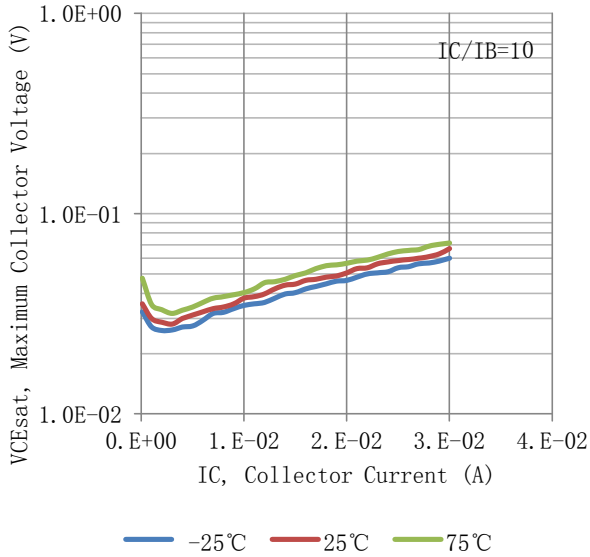


Figure 1. Collector Emitter Saturation Voltage vs. Collector Current

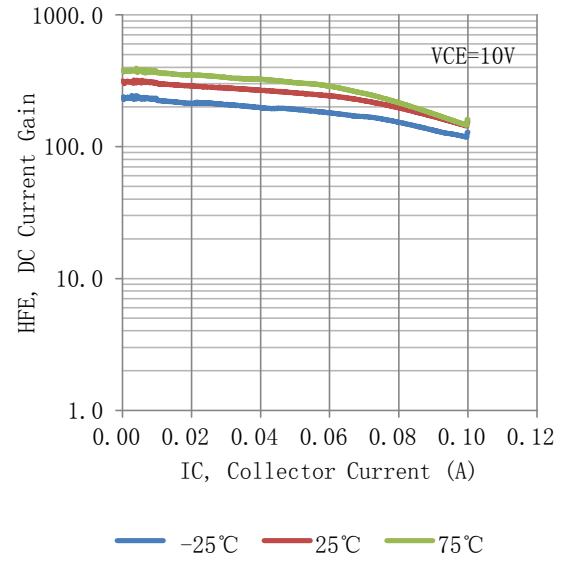


Figure 2. DC Current Gain

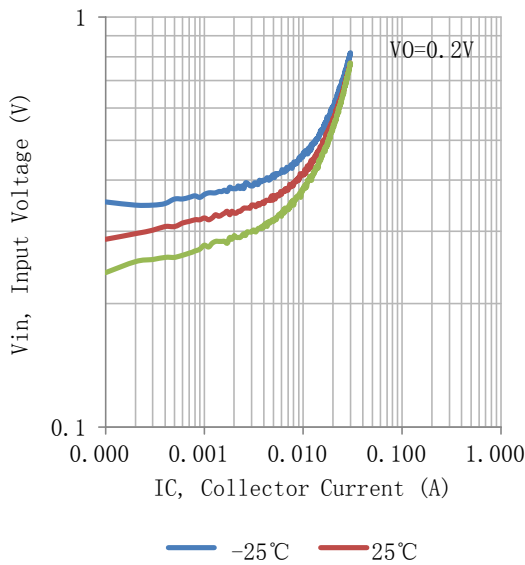


Figure 3. Input Voltage vs Output Current

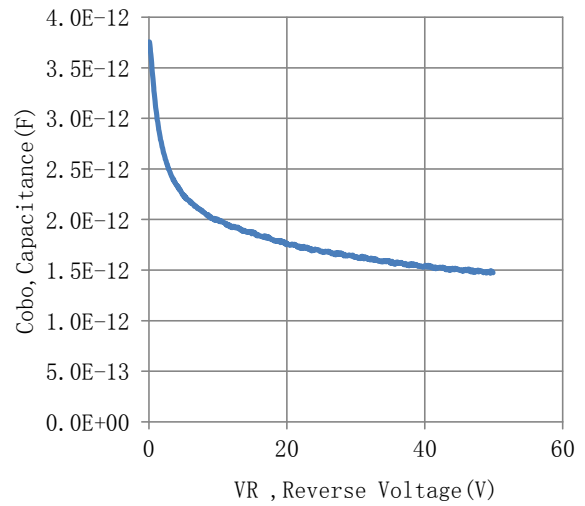


Figure 4. Capacitance

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ELECTRICAL CHARACTERISTIC CURVES

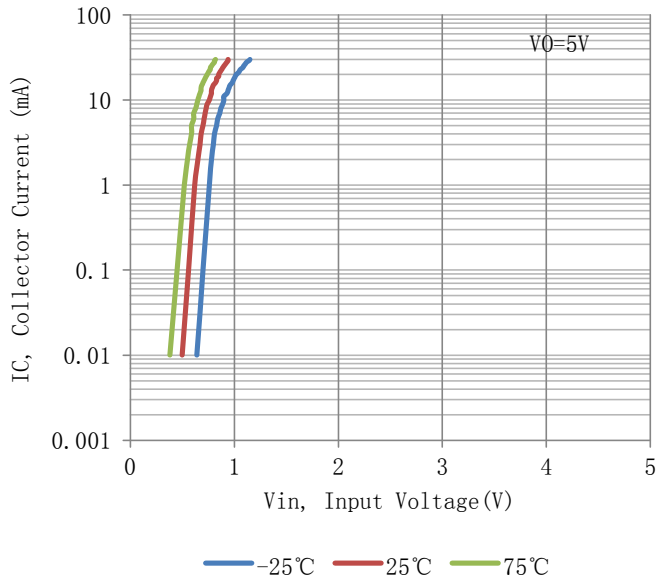


Figure 5. Output Voltage vs Input Current

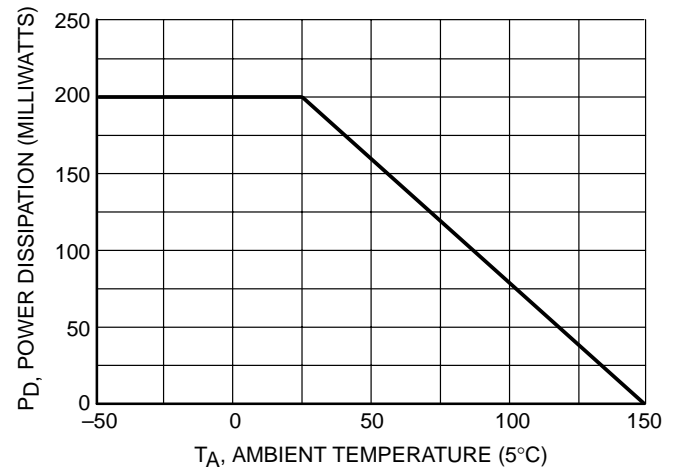
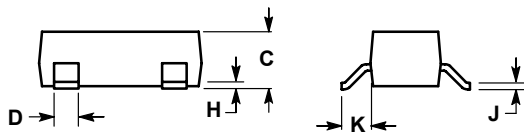
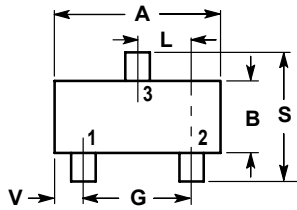


Figure 6. Derating Curve

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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

