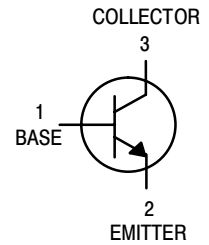
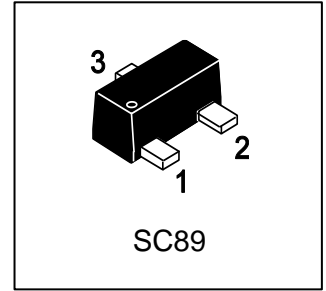


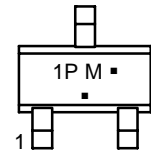
LMBT2222ATT1G

S-LMBT2222ATT1G

General Purpose Transistor NPN Silicon



MARKING DIAGRAM



1P = Specific Device Code
M = Date Code
▪ = Pb-Free Package

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.

2. DEVICE MARKING AND RESISTOR VALUES

| Device | Marking | Shipping |
|---------------|---------|-----------------|
| LMBT2222ATT1G | 1P | 3000/Tape&Reel |
| LMBT2222ATT3G | 1P | 10000/Tape&Reel |

3. MAXIMUM RATINGS(Ta = 25°C)

| Parameter | Symbol | Limits | Unit |
|--------------------------------|--------|--------|------|
| Collector–Emitter Voltage | VCEO | 40 | V |
| Collector–Base Voltage | VCBO | 75 | V |
| Emitter–Base Voltage | VEBO | 6 | V |
| Collector Current — Continuous | IC | 600 | mA |

4. THERMAL CHARACTERISTICS

| Parameter | Symbol | Limits | Unit |
|---|---------|----------|------|
| Total Device Dissipation, (Note 1) @ TA = 25°C | PD | 150 | mW |
| Thermal Resistance, Junction–to–Ambient | RθJA | 833 | °C/W |
| Operating and Storage Junction Temperature Range | TJ,Tstg | -55~+150 | °C |

1. Device mounted on FR4 glass epoxy printed circuit board using the minimum recommended footprint.
2. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%.

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

| Characteristic | Symbol | Min. | Typ. | Max. | Unit |
|--|----------|------|------|------|------|
| Collector–Emitter Breakdown Voltage(Note 1) (IC = 1.0 mA, IB = 0) | V(BR)CEO | 40 | - | - | V |
| Collector–Base Breakdown Voltage (IC = 10 μA, IE = 0) | V(BR)CBO | 75 | - | - | V |
| Emitter–Base Breakdown Voltage (IE = 10 μA, IC = 0) | V(BR)EBO | 6 | - | - | V |
| Base Cutoff Current (VCE = 60 V, VEB = 3.0 V) | IBL | - | - | 20 | nA |
| Collector Cutoff Current (VCE = 60 V, VEB = 3.0 V) | ICEX | - | - | 100 | nA |

ON CHARACTERISTICS

| | | | | | |
|---|----------|-----------------------------|-----------------------|-----------------------|---|
| DC Current Gain (IC = 0.1 mA, VCE = 10 V) (IC = 1.0 mA, VCE = 10 V) (IC = 10 mA, VCE = 10 V) (IC = 150 mA, VCE = 10 V) (IC = 500 mA, VCE = 10 V) | HFE | 35 50 75 100 40 | - - - - - | - - - - - | |
| Collector–Emitter Saturation Voltage (IC = 150 mA, IB = 15 mA) (IC = 500 mA, IB = 50 mA) | VCE(sat) | - - | - - | 0.3 1 | V |
| Base–Emitter Saturation Voltage (IC = 150 mA, IB = 15 mA) (IC = 500 mA, IB = 50 mA) | VBE(sat) | 0.6 - | - - | 1.2 2 | V |

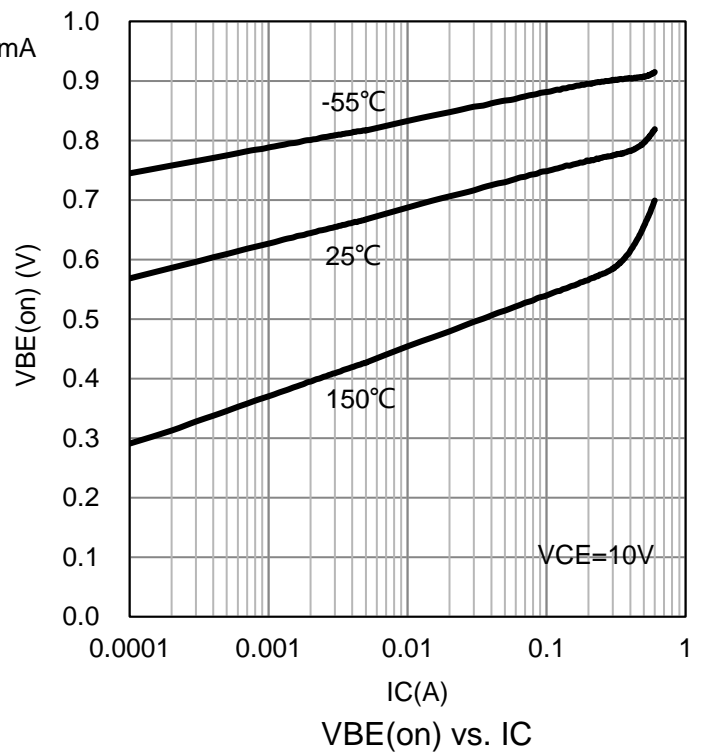
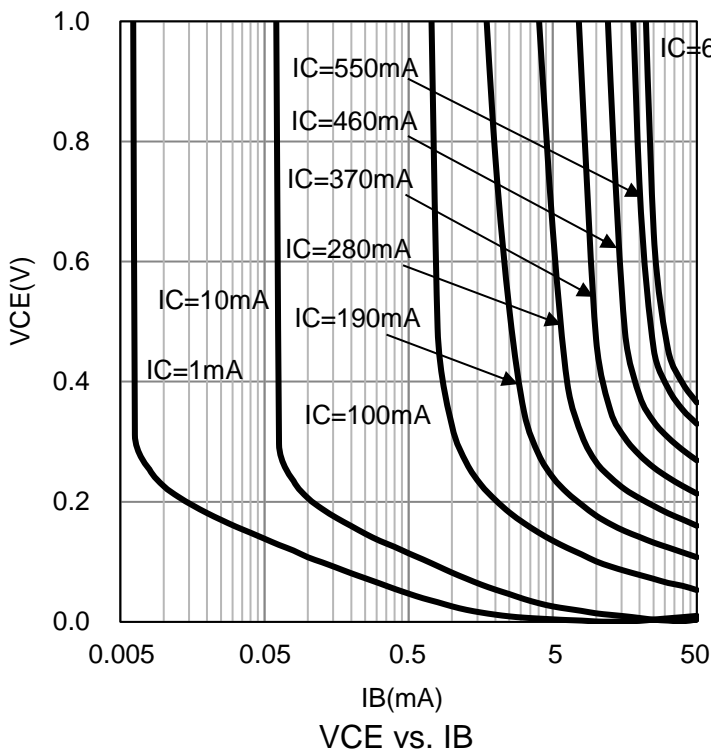
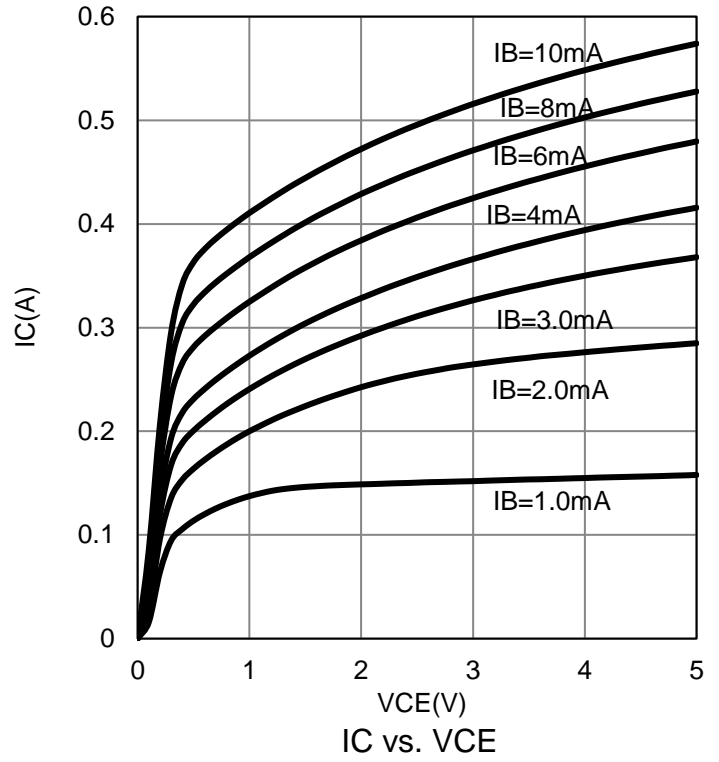
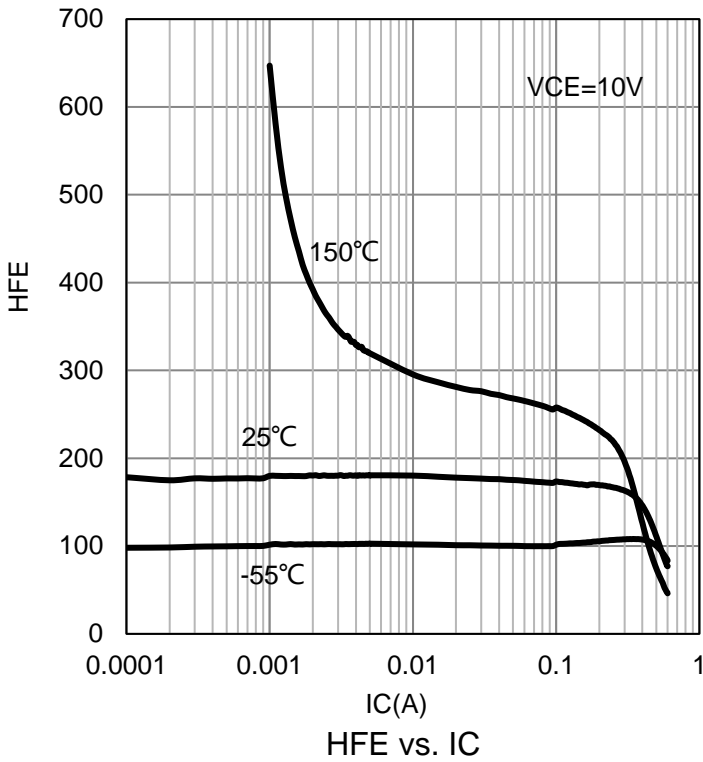
SMALL–SIGNAL CHARACTERISTICS

| | | | | | |
|---|------|------|---|------|-------------------|
| Current–Gain – Bandwidth Product (IC = 20 mA, VCE = 20 V, f = 100 MHz) | fT | 250 | - | - | MHz |
| Output Capacitance (VCB = 10 V, IE = 0, f = 1.0 MHz) | Cobo | - | - | 8 | pF |
| Input Capacitance (VEB = 0.5 V, IC = 0, f = 1.0 MHz) | Cibo | - | - | 30 | pF |
| Input Impedance (VCE = 10 V, IC = 10 mA, f = 1.0 kHz) | hie | 0.25 | - | 1.25 | kΩ |
| Voltage Feedback Ratio (VCE = 10 V, IC = 10 mA, f = 1.0 kHz) | hre | - | - | 4 | X10 ⁻⁴ |
| Small–Signal Current Gain (VCE = 10 V, IC = 10 mA, f = 1.0 kHz) | hfe | 75 | - | 375 | - |
| Output Admittance (VCE = 10 V, IC = 10 mA, f = 1.0 kHz) | hoe | 25 | - | 200 | μmhos |
| Noise Figure (VCE=10 V, IC=100μA, RS=1kΩ, f = 1 kHz) | NF | - | - | 4 | dB |

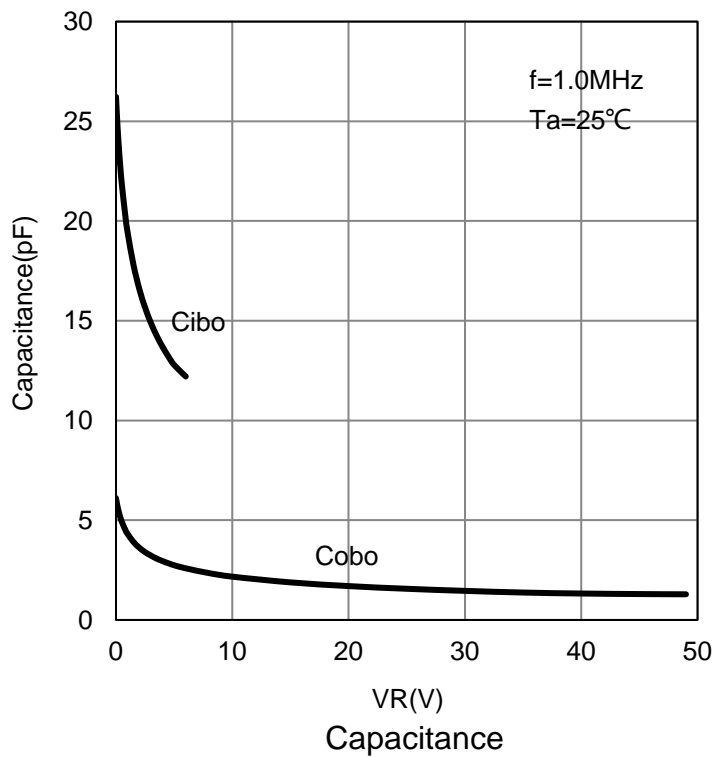
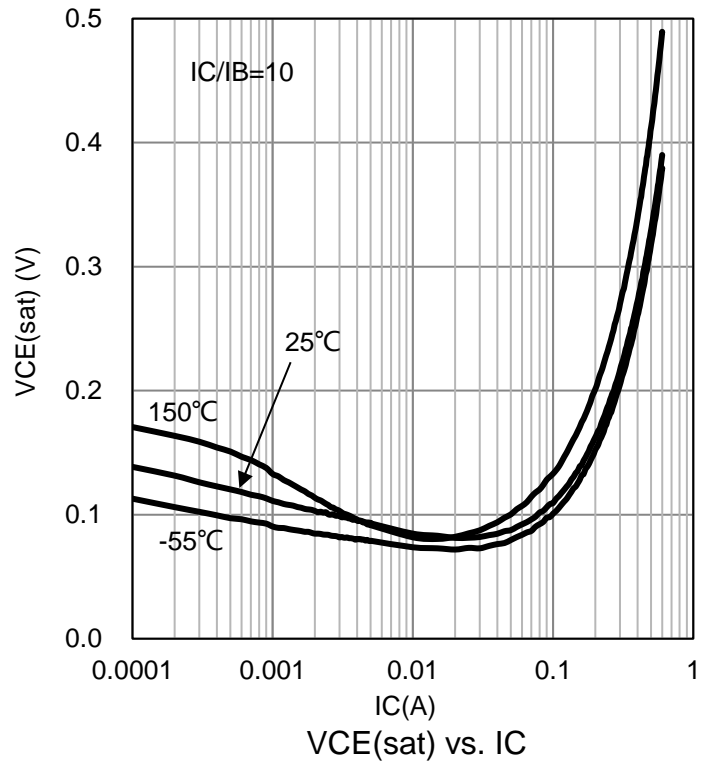
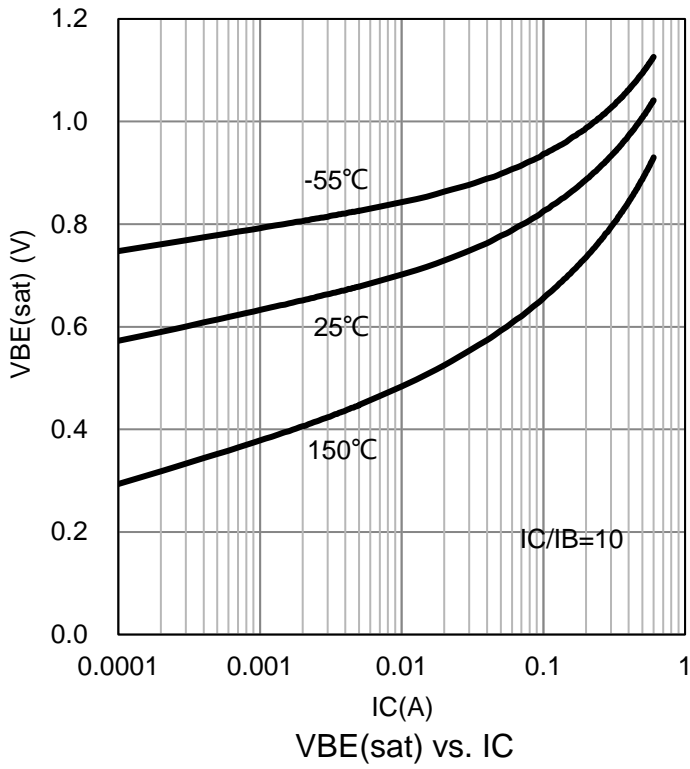
SWITCHING CHARACTERISTICS

| | | | | | | |
|--------------|---|----|---|---|-----|----|
| Delay Time | (VCC=3.0 V, VBE=-0.5 V, IC=150 mA, IB1=15 mA) | td | - | - | 10 | ns |
| Rise Time | | tr | - | - | 25 | |
| Storage Time | (VCC=30 V, IC=150mA, IB1=IB2=15mA) | ts | - | - | 225 | |
| Fall Time | | tf | - | - | 60 | |

6.ELECTRICAL CHARACTERISTICS CURVES



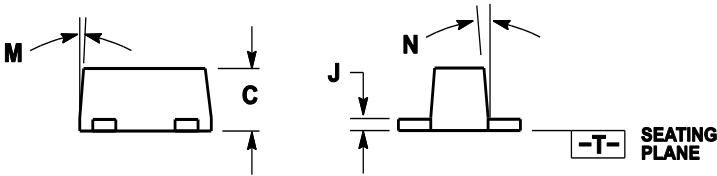
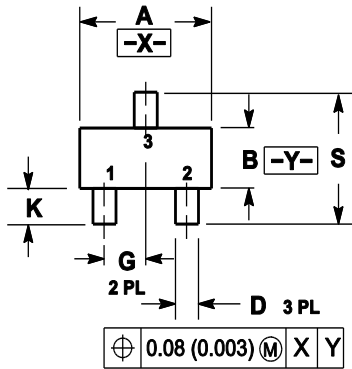
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

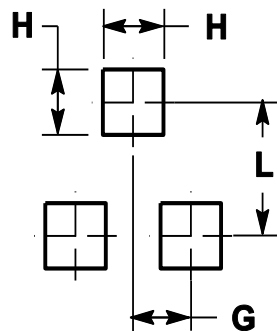
Notes:

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 A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



| DIM | MILLIMETERS | | | INCHES | | |
|-----|-------------|------|------|----------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 1.50 | 1.60 | 1.70 | 0.059 | 0.063 | 0.067 |
| B | 0.75 | 0.85 | 0.95 | 0.030 | 0.034 | 0.040 |
| C | 0.60 | 0.70 | 0.80 | 0.024 | 0.028 | 0.031 |
| D | 0.23 | 0.28 | 0.33 | 0.009 | 0.011 | 0.013 |
| G | 0.50BSC | | | 0.020BSC | | |
| H | 0.53REF | | | 0.021REF | | |
| J | 0.10 | 0.15 | 0.20 | 0.004 | 0.006 | 0.008 |
| K | 0.30 | 0.40 | 0.50 | 0.012 | 0.016 | 0.02 |
| L | 1.10REF | | | 0.043REF | | |
| M | --- | --- | 10° | --- | --- | 10° |
| N | --- | --- | 10° | --- | --- | 10° |
| S | 1.50 | 1.60 | 1.70 | 0.059 | 0.063 | 0.067 |

8. SOLDERING FOOTPRINT



单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)