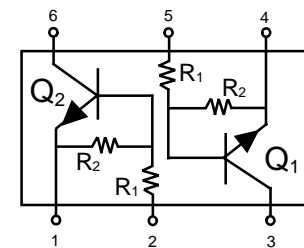
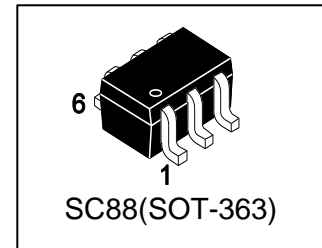


LMUN5233DW1T1G

S-LMUN5233DW1T1G

Dual Bias Resistor Transistors
NPN Silicon Surface Mount Transistors
with Monolithic Bias Resistor Network



1. FEATURES

- Simplifies circuit design
- Reduces board space.
- Reduces Component Count
- 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)	Vin(V)	Shipping
LMUN5233DW1T1G	7K	4.7	47	-5~+30	3000/Tape&Reel
LMUN5233DW1T3G	7K	4.7	47	-5~+30	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
Emitter–Base Breakdown Voltage	V _{EBO}	6	V
Collector Current	I _C	100	mA

4. THERMAL CHARACTERISTICS

Parameter (One Junction Heated)	Symbol	Limits	Unit
Total Device Dissipation, (Note 1) @ TA = 25°C Derate above 25°C	PD	187 1.5	mW mW/°C
Thermal Resistance, Junction–to–Ambient(Note 1)	R _{θJA}	670	°C/W
Parameter (Both Junctions Heated)	Symbol	Limits	Unit
Total Device Dissipation, (Note 1) @ TA = 25°C Derate above 25°C	PD	250 2	mW mW/°C
Thermal Resistance, Junction–to–Ambient(Note 1)	R _{θJA}	493	°C/W
Thermal Resistance, Junction–to–Lead(Note 1)	R _{θJL}	188	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

1. FR-4 @ Minimum Pad

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

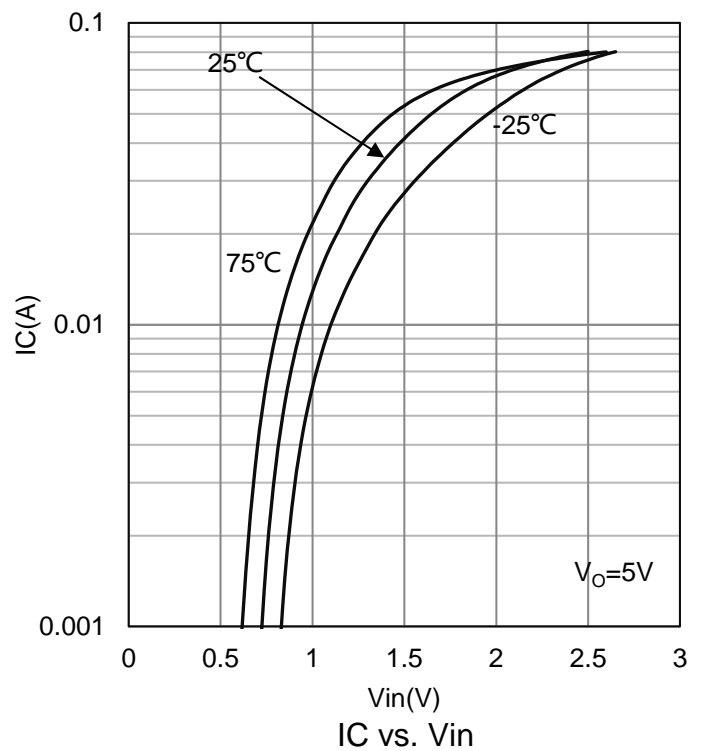
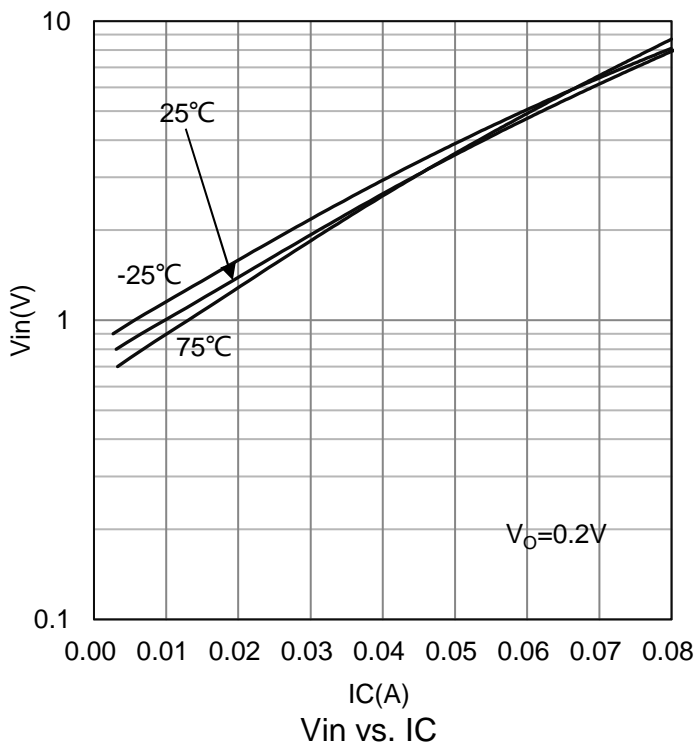
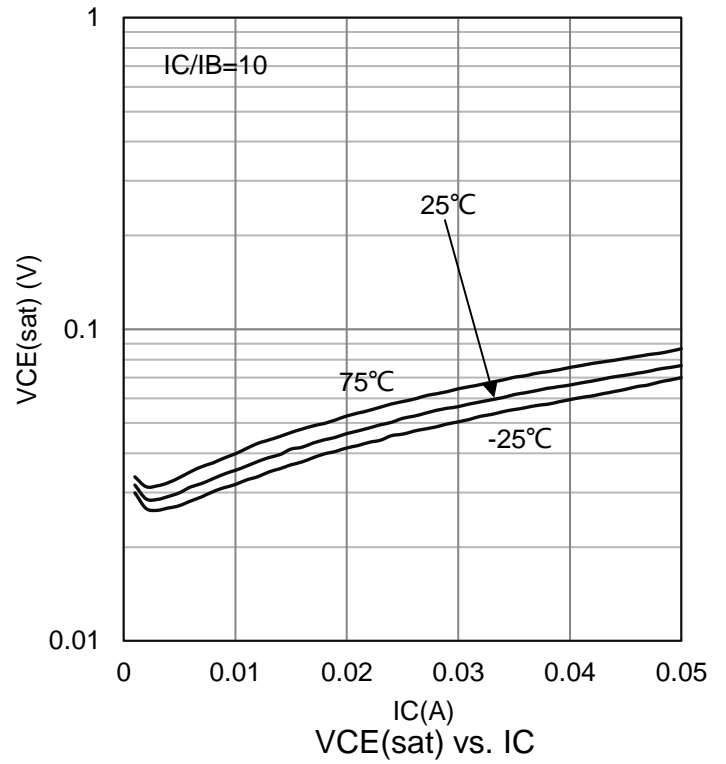
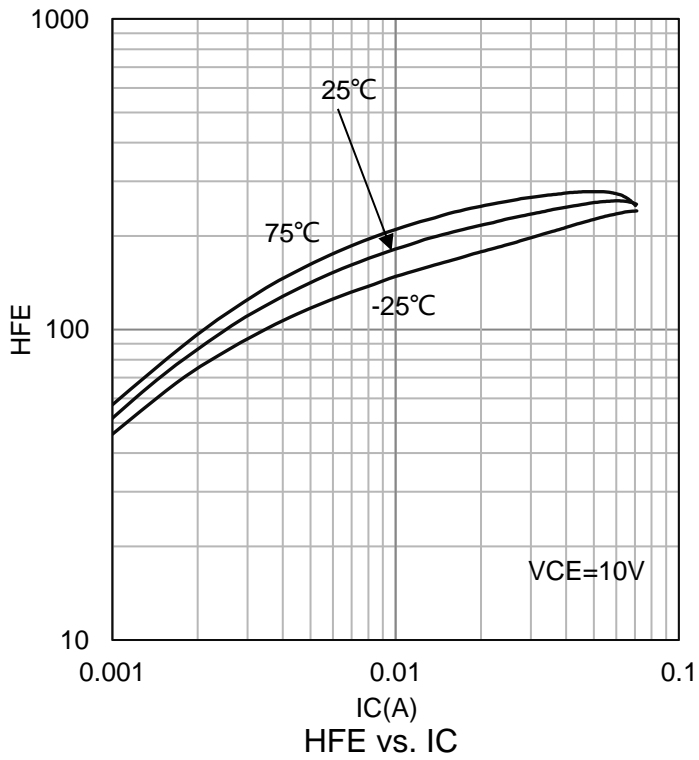
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = 2.0 mA, IB = 0)	VBR(CEO)	50	-	-	V
Collector–Base Breakdown Voltage (IC = 10 μA, IE = 0)	VBR(CBO)	50	-	-	V
Emitter-Base Breakdown Voltage (IE=200μA, IC=0)	VBR(EBO)	6	-	-	V
Collector-Base Cutoff Current (VCB = 50 V, IE = 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	-	-	0.18	mA

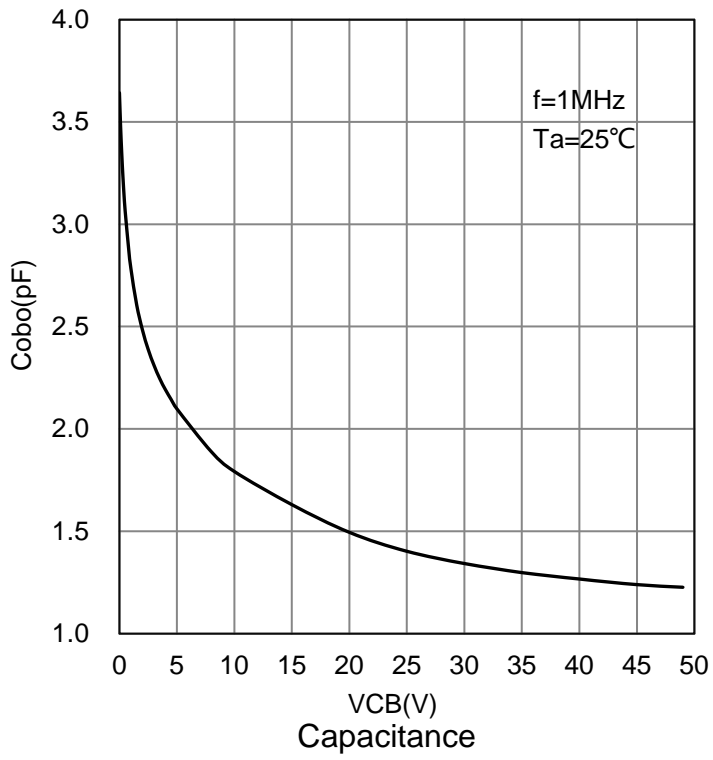
ON CHARACTERISTICS (Note 2.)

DC Current Gain (IC = 5.0 mA, VCE = 10 V)	HFE	80	200	-	
Collector–Emitter Saturation Voltage (IC = 10 mA, IB = 1 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 (off) (VCC = 5.0 V, VB = 0.5 V, RL =1.0KΩ)	VOH	4.9	-	-	V
Input Resistor	R1	3.3	4.7	6.1	KΩ
Resistor Ratio	R1/R2	0.055	0.1	0.185	

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

6. ELECTRICAL CHARACTERISTICS CURVES

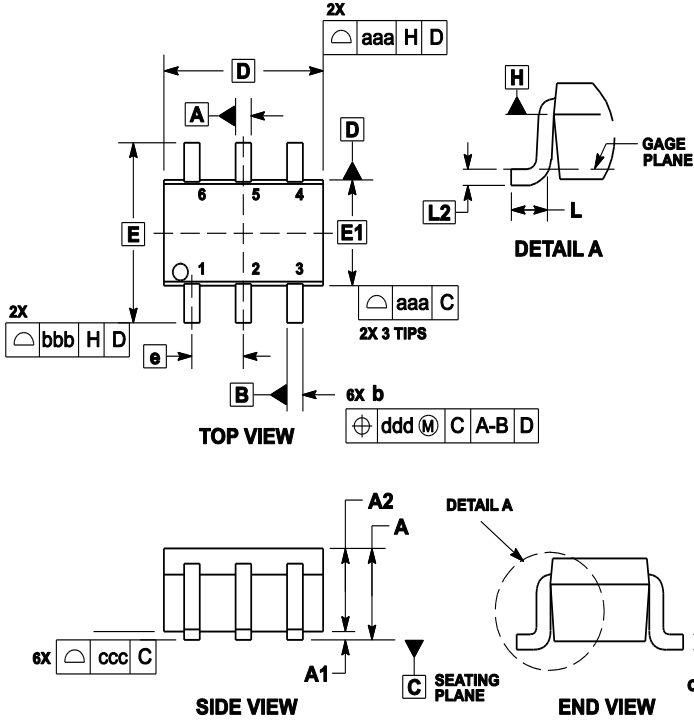


6. ELECTRICAL CHARACTERISTICS CURVES(Con.)

7. OUTLINE AND DIMENSIONS

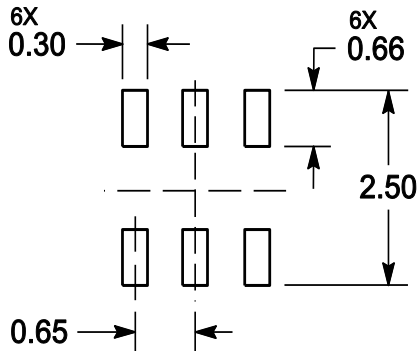
Notes:

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 D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	---	---	1.10	---	---	0.043
A1	0.00	---	0.10	0	---	0.004
A2	0.70	0.90	1.00	0.027	0.035	0.039
b	0.15	0.20	0.25	0.006	0.008	0.01
C	0.08	0.15	0.22	0.003	0.006	0.009
D	1.80	2.00	2.20	0.07	0.078	0.086
E	2.00	2.10	2.20	0.078	0.082	0.086
E1	1.15	1.25	1.35	0.045	0.049	0.053
e	0.65 BSC			0.026 BSC		
L	0.26	0.36	0.46	0.010	0.014	0.018
L2	0.15 BSC			0.006 BSC		
aaa	0.15			0.01		
bbb	0.30			0.01		
ccc	0.10			0.00		
ddd	0.10			0.00		

8. SOLDERING FOOTPRINT



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