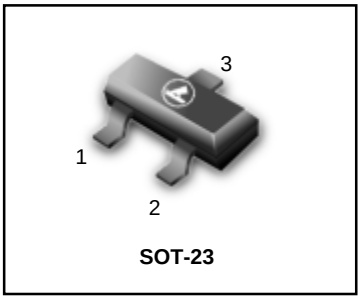
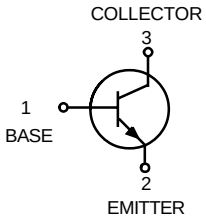
High-Frequency Amplifier Transistor

L2SC3838LT1G



SOT-23



● **Features**

1.High transition frequency.(Typ.f_T=3.2GHz)

2.Small rbb`Cc and high gain.(Typ.4ps)

3.Small NF.

4.We declare that the material of product compliance with RoHS requirements.

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	11	V
Emitter-base voltage	V_{EBO}	3	V
Collector Current	I_C	50	mA
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~+150	°C

DEVICE MARKING

L2SC3838LT1G=AD

● ORDERING INFORMATION

Device	Package	Shipping
L2SC3838LT1G	SOT-23	3000/Tape & Reel
L2SC3838LT3G	SOT-23	10000/Tape & Reel

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter	Symbol	Min.	Typ	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	20	–	–	V	I_C=10μA
Collector-emitter breakdown voltage	BV_{CEO}	11	–	–	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	3	–	–	V	I_E=10μA
Collector cutoff current	I_{CBO}	–	–	0.5	μA	V_{CB}=10V
Emitter cutoff current	I_{EBO}	–	–	0.5	μA	V_{EB}=2V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	0.5	V	I_C/I_B=10mA/5mA
DC current transfer ratio	h_{FE}	56	–	180	–	V_{CE}/I_C=10V/5mA
Transition frequency	f_T	1.4	3.2	–	GHz	V_{CE}=10V, I_E=-10mA, f=500MHz
Output capacitance	Cob	–	0.8	1.5	pF	V_{CB}=10V, I_E=0A, f=1MHz
Collector-base time constant	rbb`Cc	–	4	12	ps	V_{CB}=10V, I_C=10mA, f=31.8MHz
Noise factor	NF	–	3.5	–	dB	V_{CE}=6V, I_C=2mA, f=500MHz,Rg=50Ω

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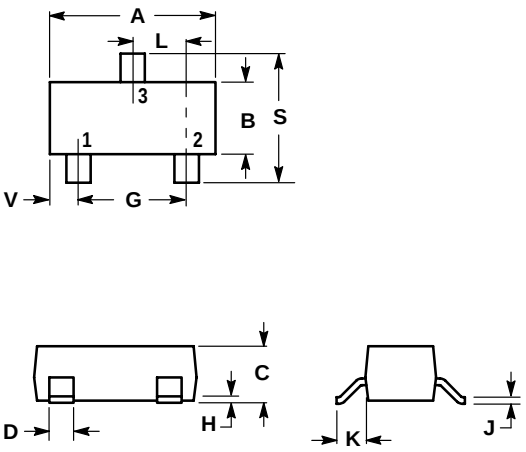

NOTES:

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