Low frequency transistor

The transistor of 500mA class which went only into 2125 size conventionally was attained in 1608 sizes or 1208 sizes.

●Applications

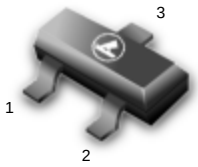
For switching, for muting.

PNP

●Features

1) A collector current is large.
2) Collector saturation voltage is low.
   $V_{CE\,(sat)}$ ≤ 250mA
   At I_C = –200mA / I_B = –10mA
3) We declare that the material of product compliance with RoHS requirements.

L2SA2030M3T5G

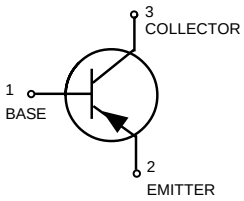


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●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–15	V
Collector-emitter voltage	V_{CEO}	–12	V
Emitter-base voltage	V_{EBO}	–6	V
Collector current	I_C	–500	mA
	I_{CP}	–1	A *
Collector power dissipation	P_C	150	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C

*Single pulse, Pw=1ms



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–15	–	–	V	I_C= –10μA
Collector-emitter breakdown voltage	BV_{CEO}	–12	–	–	V	I_C= –1mA
Emitter-base breakdown voltage	BV_{EBO}	–6	–	–	V	I_E= –10μA
Collector cutoff current	I_{CBO}	–	–	–100	nA	V_{CB}= –15V
Emitter cutoff current	I_{EBO}	–	–	–100	nA	V_{EB}= –6V
DC current transfer ratio	h_{FE}	270	–	680	–	V_{CE}= –2V / I_C= –10mA
Collector-emitter saturation voltage	$V_{CE\,(sat)}$	–	–100	–250	mV	I_C= –200mA / I_B= –10mA
Transition frequency	f_T	–	260	–	MHz	V_{CE}= –2V, I_E=10mA, f_T=100MHz
Output capacitance	Cob	–	6.5	–	pF	V_{CB}= –10V, I_E=0A, f=1MHz

● Device marking and ordering information

Device	Marking	Shipping
L2SA2030M3T5G	BW	4000/Tape&Reel

L2SA2030M3T5G

Electrical characteristic curves

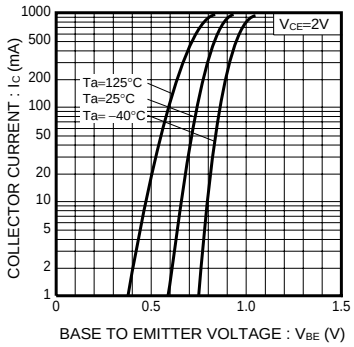


Fig.1 Grounded Emitter Propagation Characteristics

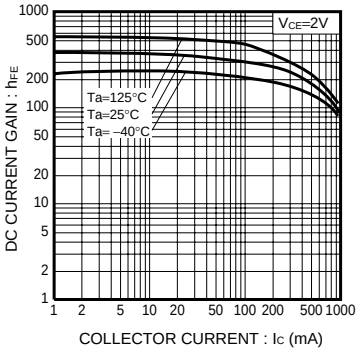


Fig.2 DC Current Gain vs. Collector Current

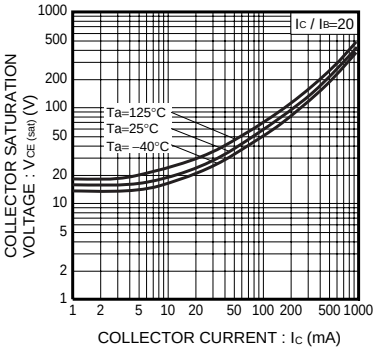


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

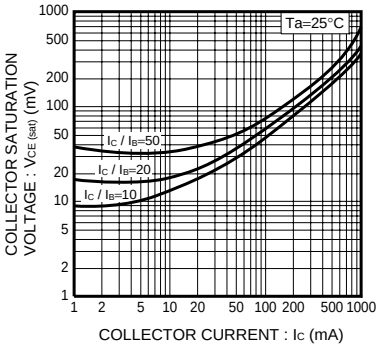


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

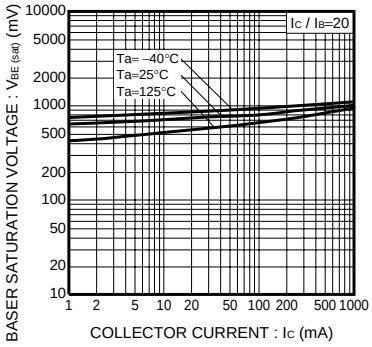


Fig.5 Base-Emitter Saturation Voltage vs.Collecter Current

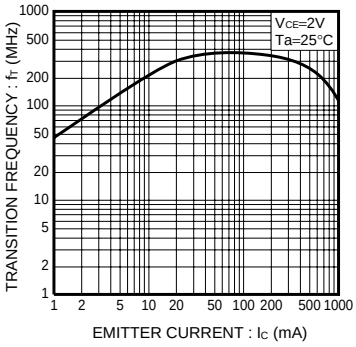


Fig.6 Gain Bandwidth Product vs. Emitter Current

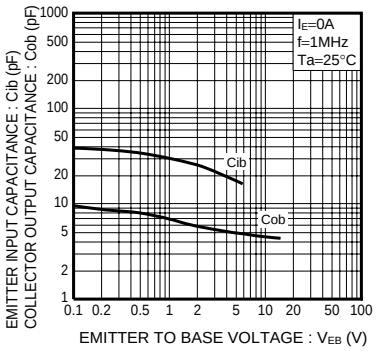
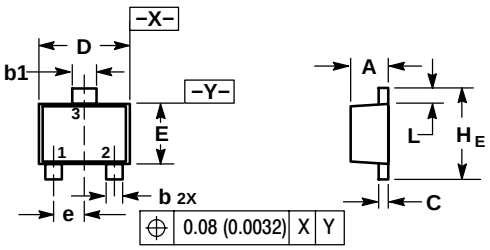


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

L2SA2030M3T5G

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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 E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
b	0.15	0.21	0.27	0.0059	0.0083	0.0106
b1	0.25	0.31	0.37	0.010	0.012	0.015
C	0.07	0.12	0.17	0.0028	0.0047	0.0067
D	1.15	1.20	1.25	0.045	0.047	0.049
E	0.75	0.80	0.85	0.03	0.032	0.034
e	0.40 BSC			0.016 BSC		
H E	1.15	1.20	1.25	0.045	0.047	0.049
L	0.15	0.20	0.25	0.0059	0.0079	0.0098

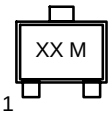
STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR

STYLE 2:
PIN 1. ANODE
2. N/C
3. CATHODE

STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

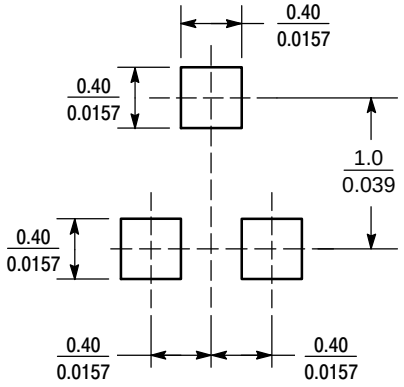
GENERIC MARKING DIAGRAM*



XX = Specific Device Code
M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G”, may or not be present.

SOLDERING FOOTPRINT FOR SOT−723



SCALE 20:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$