

Low frequency transistor

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

●Applications

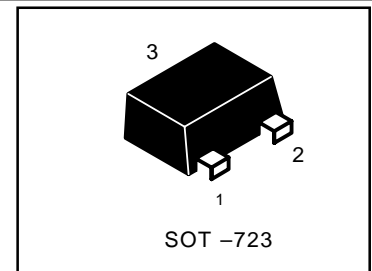
For switching, for muting.

PNP

●Features

- 1) A collector current is large.
- 2) Collector saturation voltage is low.
 $V_{CE(sat)} \leq 250\text{mA}$
 At $I_c = -200\text{mA} / I_B = -10\text{mA}$
- 3) We declare that the material of product compliance with RoHS requirements.
- 4) S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

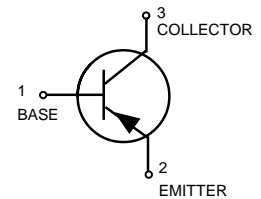
L2SA2030M3T5G
S-L2SA2030M3T5G



●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	T_j	150	°C
Storage temperature	T_{stg}	-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	$I_c = -10\mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	-12	-	-	V	$I_c = -1\text{mA}$
Emitter-base breakdown voltage	BV_{EBO}	-6	-	-	V	$I_E = -10\mu\text{A}$
Collector cutoff current	I_{CBO}	-	-	-100	nA	$V_{CB} = -15\text{V}$
Emitter cutoff current	I_{EBO}	-	-	-100	nA	$V_{EB} = -6\text{V}$
DC current transfer ratio	h_{FE}	270	-	680	-	$V_{CE} = -2\text{V} / I_c = -10\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-100	-250	mV	$I_c = -200\text{mA} / I_B = -10\text{mA}$
Transition frequency	f_T	-	260	-	MHz	$V_{CE} = -2\text{V}, I_E = 10\text{mA}, f = 100\text{MHz}$
Output capacitance	C_{ob}	-	6.5	-	pF	$V_{CB} = -10\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$

● Device marking and ordering information

Device	Marking	Shipping
L2SA2030M3T5G S-L2SA2030M3T5G	BW	8000/Tape&Reel

L2SA2030M3T5G;S-L2SA2030M3T5G

Electrical characteristic curves

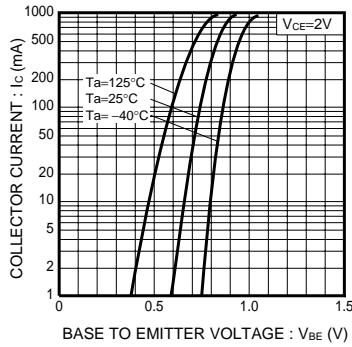


Fig.1 Grounded Emitter Propagation Characteristics

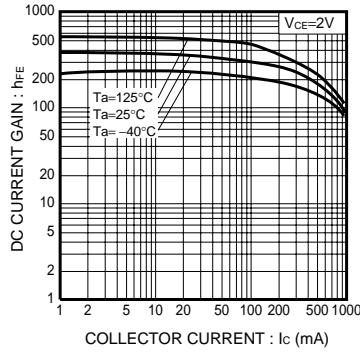


Fig.2 DC Current Gain vs. Collector Current

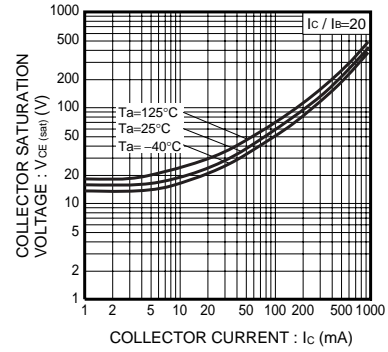


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

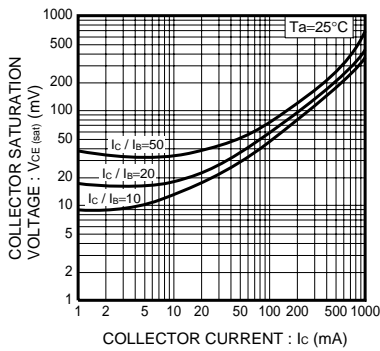


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

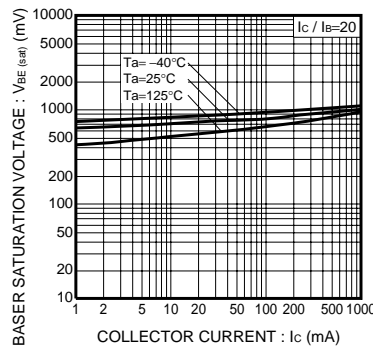


Fig.5 Base-Emitter Saturation Voltage vs. Collector Current

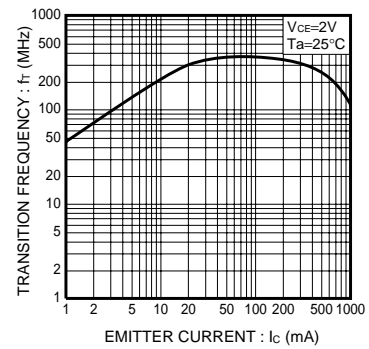


Fig.6 Gain Bandwidth Product vs. Emitter Current

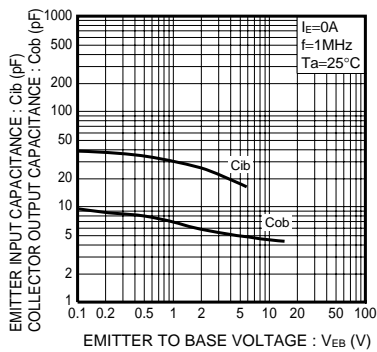
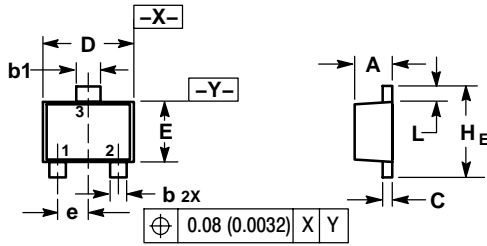


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

L2SA2030M3T5G;S-L2SA2030M3T5G

SOT-723

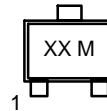


NOTES:

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.

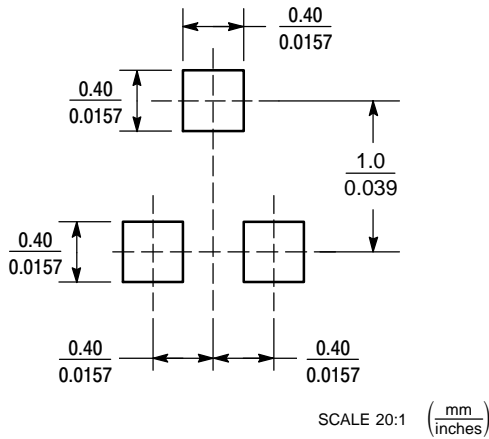
DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
b	0.15	0.21	0.27	0.0059	0.0083	0.0106
b1	0.25	0.31	0.37	0.010	0.012	0.015
C	0.07	0.12	0.17	0.0028	0.0047	0.0067
D	1.15	1.20	1.25	0.045	0.047	0.049
E	0.75	0.80	0.85	0.03	0.032	0.034
e	0.40 BSC			0.016 BSC		
H E	1.15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

GENERIC MARKING DIAGRAM*



- | | | | |
|---|--|--|--|
| 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 |
|---|--|--|--|

SOLDERING FOOTPRINT FOR SOT-723



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.