

2SC2413K

Rev.F Apr.-2017

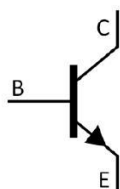
SOT-23

NPN

Silicon NPN transistor in a SOT-23 Plastic Package.

Low C_{ob} .

High-frequency amplifier applications.



PIN1 Base

PIN 2 Emitter

PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	N	P	Q
h_{FE} Range	56 120	82 180	120 270
Marking	HAN	HAP	HAQ

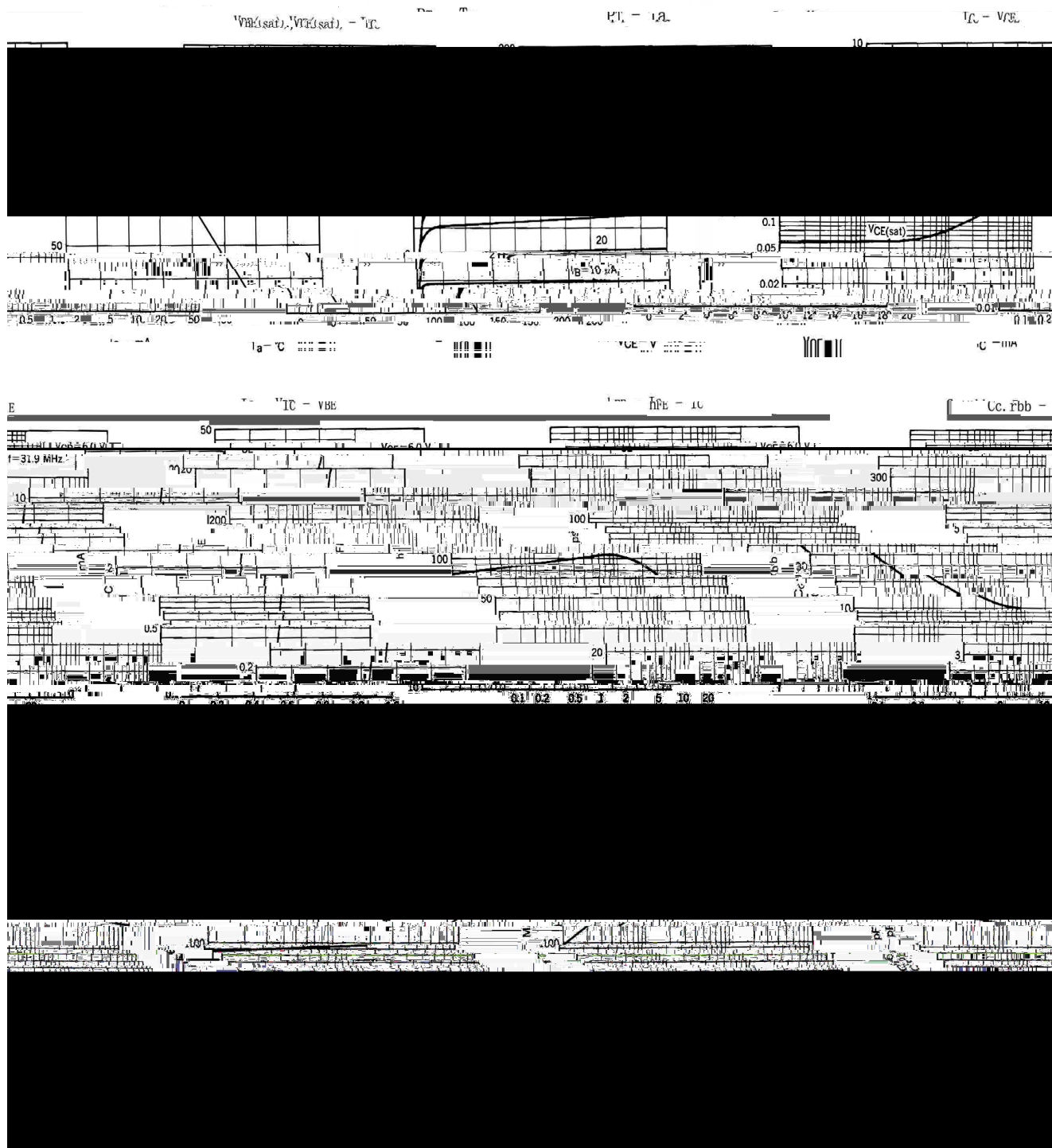
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	50	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- Base Breakdown Voltage	V_{CBO}	$I_C=50\text{ A}$ $I_E=0$	40			V
Collector-Emitter Breakdown Voltage	V_{CEO}	$I_C=1.0\text{mA}$ $I_B=0$	25			V
Emitter-Base Breakdown Voltage	V_{EBO}	$I_E=50\text{ A}$ $I_C=0$	5.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=24\text{V}$ $I_E=0$			0.5	A
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=3.0\text{V}$ $I_C=0$			0.5	A
DC Current Gain	h_{FE}	$V_{CE}=6.0\text{V}$ $I_C=1.0\text{mA}$	56		270	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}$ $I_B=1.0\text{mA}$		0.1	0.3	V
Transition Frequency	f_T	$V_{CE}=6.0\text{V}$ $I_C=1.0\text{mA}$ $f=100\text{MHz}$	150	300		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=6.0\text{V}$ $I_E=0\text{mA}$ $f=1.0\text{MHz}$		1.3	2.2	pF

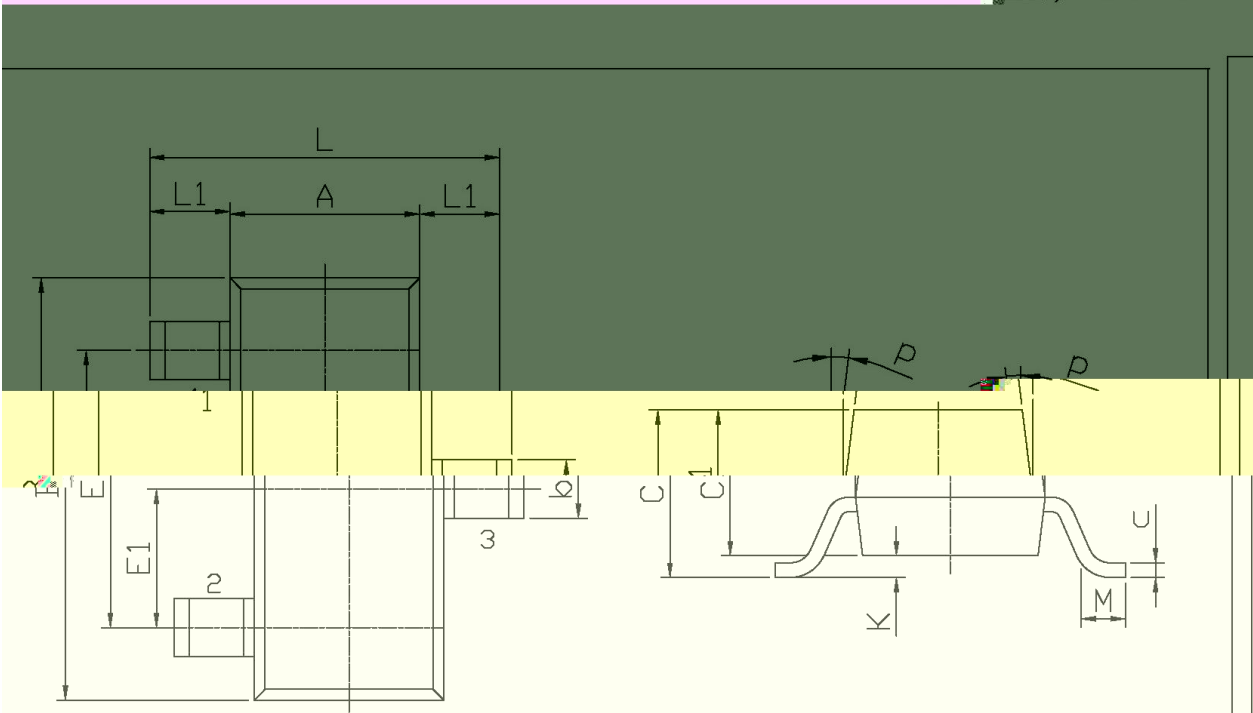
/ Electrical Characteristic Curve



/ Package Dimensions

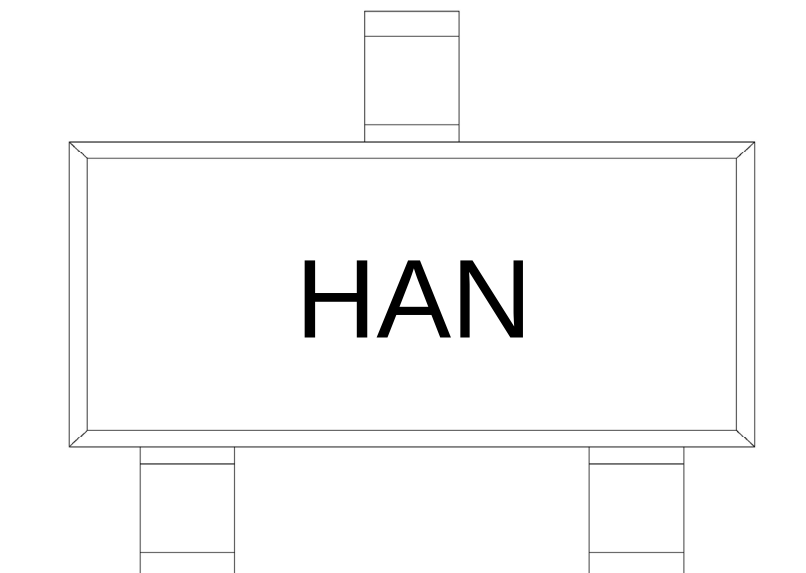
SOT-23

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
R	2.70	3.40			

/ Marking Instructions



H

A

N h_{FE}

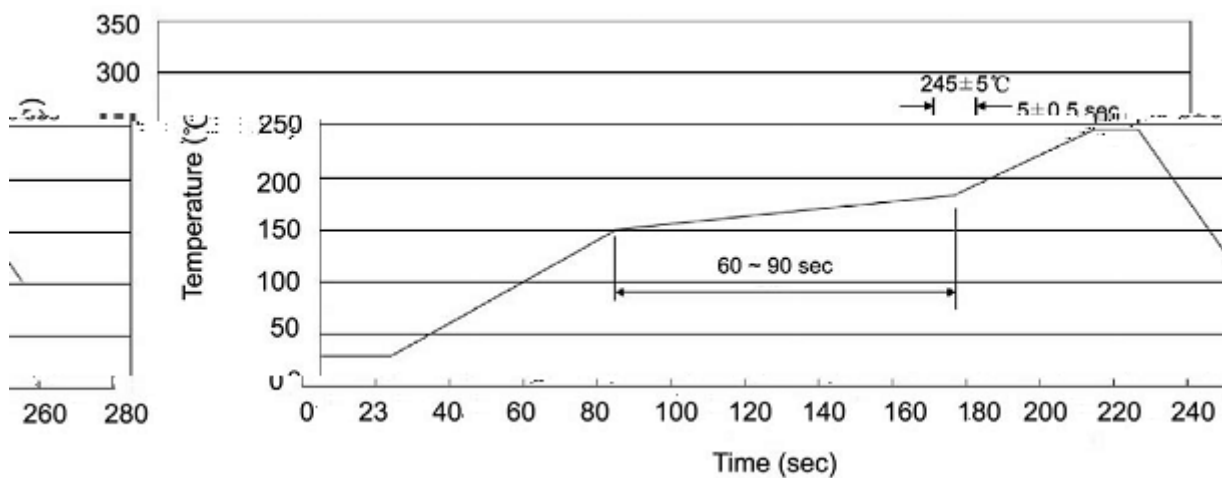
Note:

H Company Code

A Product Type Code

N h_{FE} Classifications Symbol Code

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Note:

- | | | | | | |
|---|-------|-----|----|-----------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 245±5 | | | 5±0.5sec; | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		

/ Notices