

# KTC3199M

Rev.F Apr.-2017

## / Descriptions

JF K\$) \* E GE Silicon NPN transistor in a SOT-23 Plastic Package.

## / Features

# —=< #  
High DC current gain, excellent  $h_{FE}$  linearity, low noise.

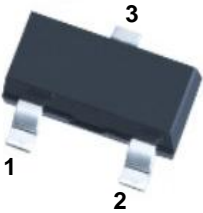
## / Applications

General amplifier and switching application.

## / Equivalent Circuit



## / Pinning



PIN 1 Base    PIN 2 Emitter    PIN 3 Collector

## / $h_{FE}$ Classifications & Marking

$h_{FE}$ Classifications Symbol	O	Y	GR	BL
$h_{FE}$ Range	70 140	120 240	200 400	350 700
Marking	HHFO	HHFY	HHFG	HHFB

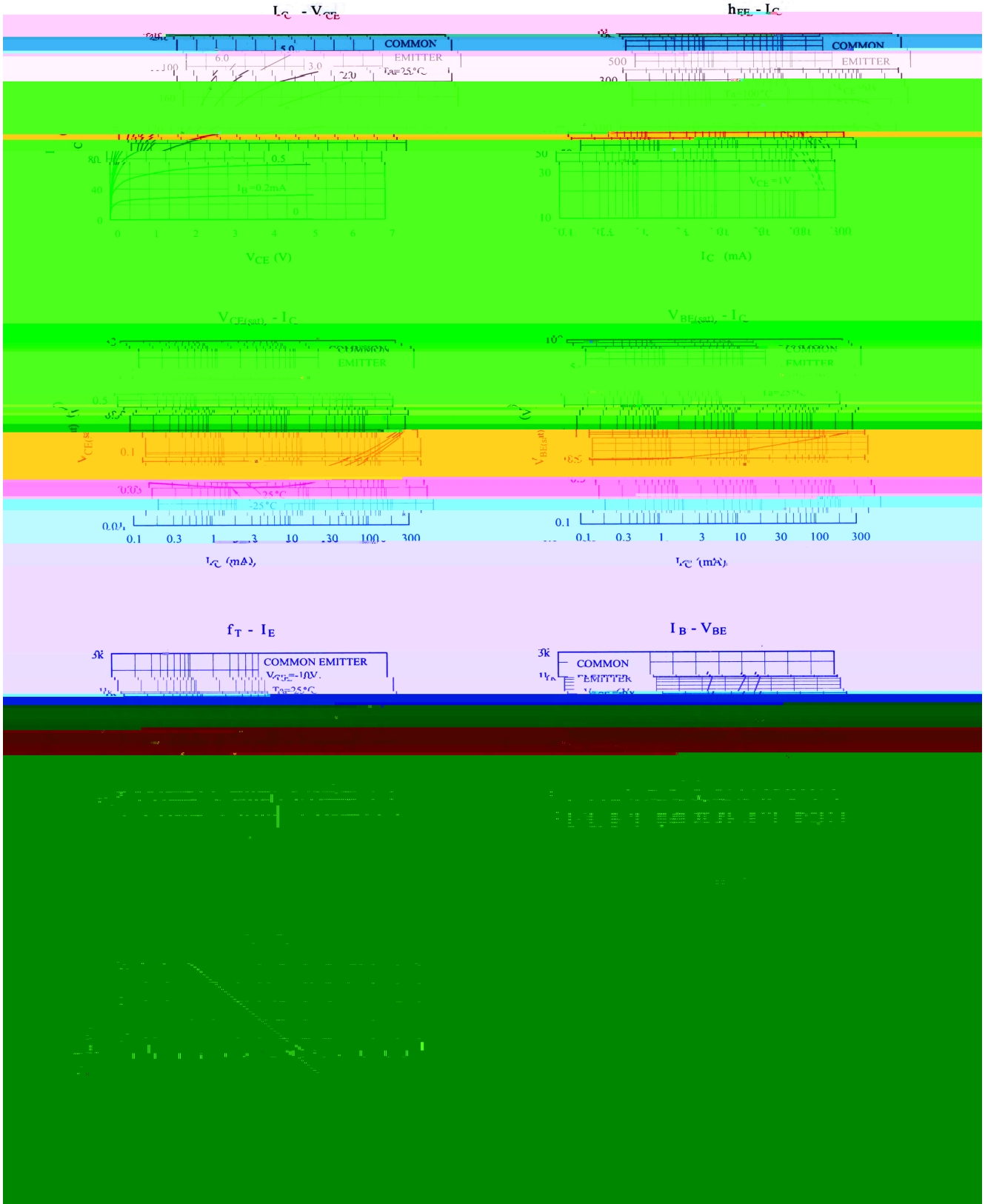
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	50	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	150	mA
Emitter Current	$I_E$	-150	mA
Collector Power Dissipation	$P_C$	250	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 Cut-Off Current	$I_{CBO}$	$V_{CB}=50V$ $I_E=0$			0.1	A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5.0V$ $I_C=0$			0.1	A
DC Current Gain	$h_{FE}$	$V_{CE}=6.0V$ $I_C=2.0mA$	70		700	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA$ $I_B=10mA$		0.1	0.25	V
Transition Frequency	$f_T$	$V_{CE}=10V$ $I_C=1.0mA$	80			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V$ $f=1.0MHz$ $I_E=0$		2.0	3.5	pF
Noise Figure	NF	$V_{CE}=6.0V$ $f=1.0KHz$ $I_C=0.1mA$ $R_G=10K$		1.0	10	dB

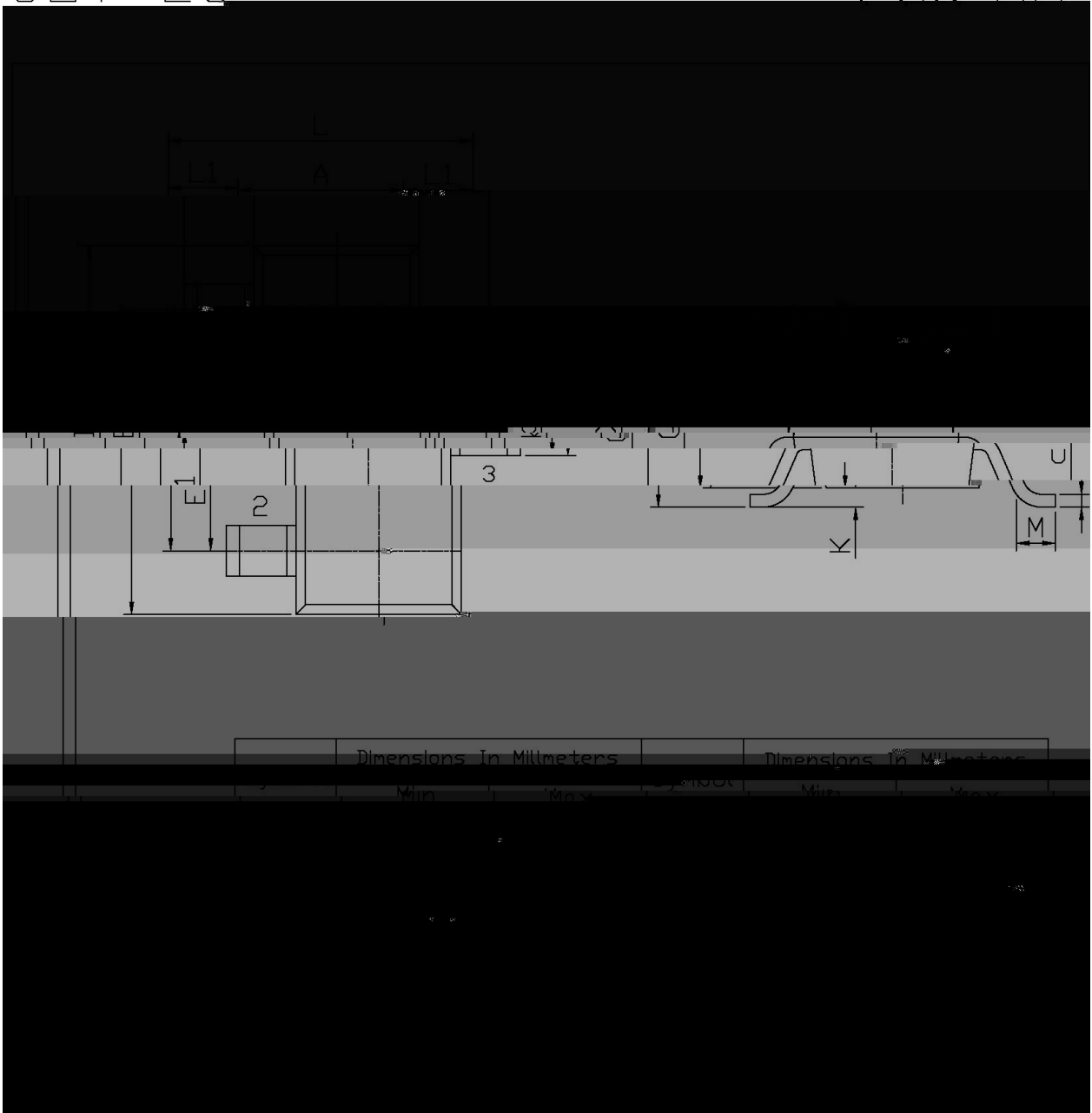
/ Electrical Characteristic Curve

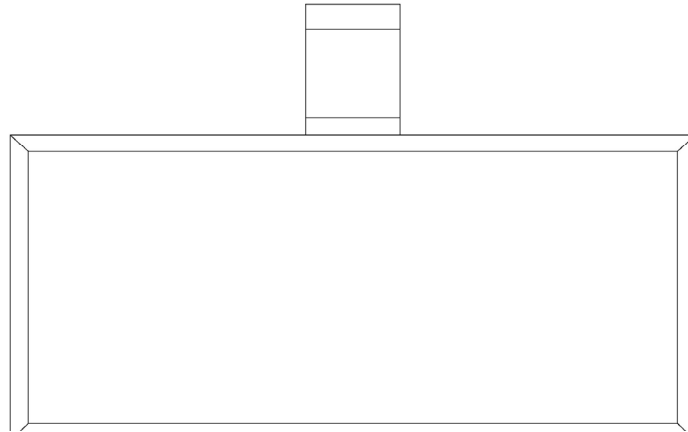


/ Package Dimensions

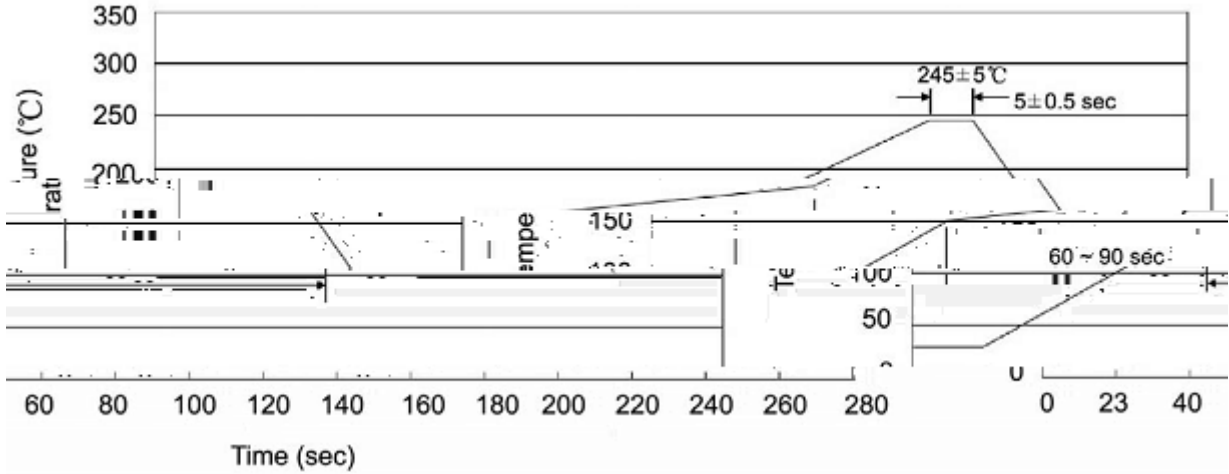
SOT-23

单位: mm





( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices