

KSD1616(A)

Rev.E Mar.-2016

描述 / Descriptions

TO-92 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a TO-92 Plastic Package.

特征 / Features

与 KSB1116(A)互补

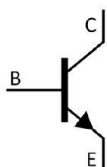
Complementary pair with KSB1116(A)

用途 / Applications

用于音频功率放大,中速开关。

Audio frequency power amplifier, medium speed switching.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base

PIN 2 : Collector

PIN 3 : Emitter

放大及印章代码 / hFE Classifications & Marking

h _{FE} Classifications Symbol	Y	G	L
h _{FE} Range	135~270	200~400	300~600

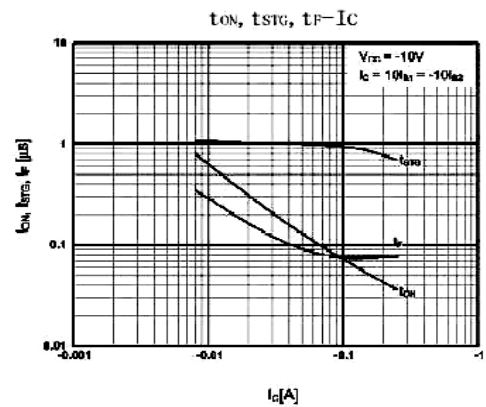
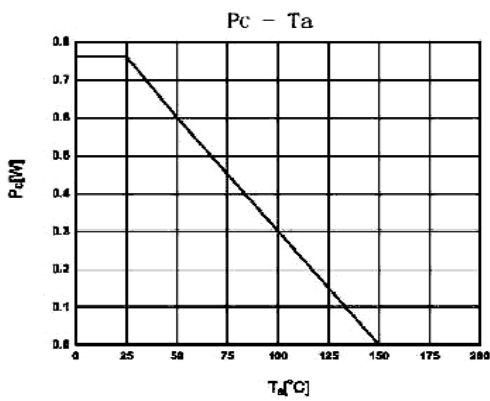
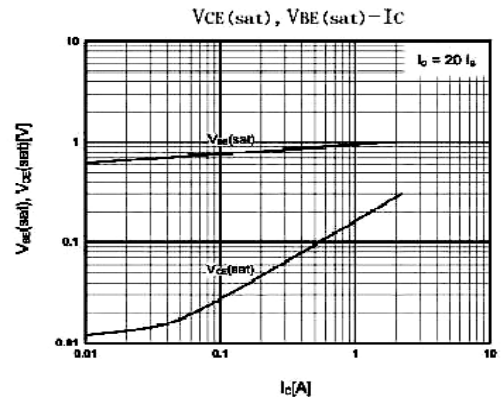
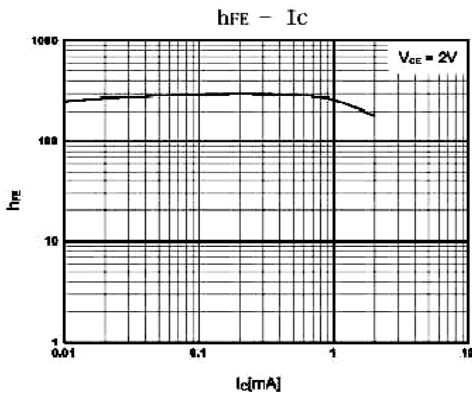
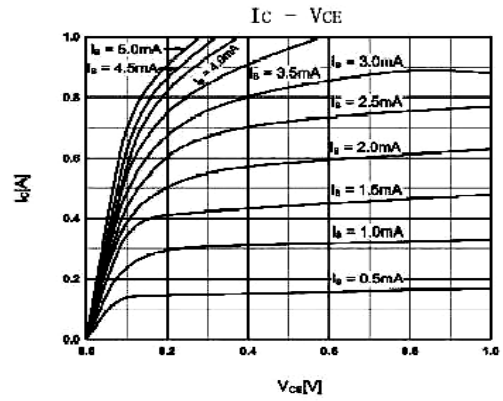
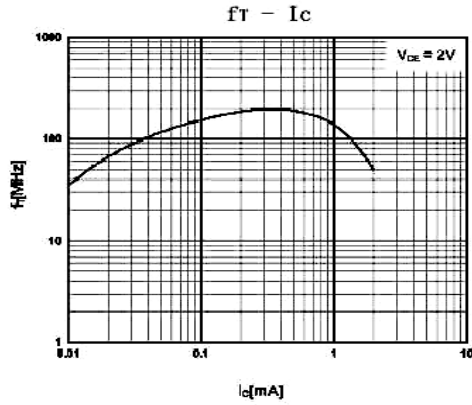
极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V _{CBO}	KSD1616	60
		KSD1616A	120
Collector to Emitter Voltage	V _{CEO}	KSD1616	50
		KSD1616A	60
Emitter to Base Voltage	V _{EBO}	6.0	V
Collector Current - Continuous	I _C	1.0	A
Collector Current – Continuous(Pulse)	I _{CP}	2.0	A
Collector Power Dissipation	P _C	750	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~150	°C

电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector Cut-Off Current	I _{CBO}	V _{CB} =60V I _E =0			0.1	μA
Emitter Cut-Off Current	I _{EBO}	V _{EB} =6.0V I _C =0			0.1	μA
DC Current Gain	h _{FE(1)}	V _{CE} =2.0V I _C =100mA	KSD1616	135	600	
			KSD1616A	135	400	
	h _{FE(2)}	V _{CE} =2.0V I _C =1.0A	81			
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =1.0A I _B =50mA		0.15	0.3	V
Base to Emitter Saturation Voltage	V _{BE(sat)}	I _C =1.0A I _B =50mA		0.9	1.2	V
Base to Emitter On Voltage	V _{BE(on)}	V _{CE} =2.0V I _C =50mA	600	640	700	mV
Transition Frequency	f _T	V _{CE} =2.0V I _C =100mA	100	160		MHz
Collector Output Capacitance	C _{ob}	V _{CB} =10V I _E =0 f=1.0MHz		19		pF
Turn-On Time	t _{on}	V _{CC} =10V I _C =100mA		0.07		μs
Storage Time	t _{stg}	I _{B1} =-I _{B2} =10mA		0.95		μs
Turn-Off Time	t _{off}	V _{BE(off)} =-2V~-3V		0.07		μs

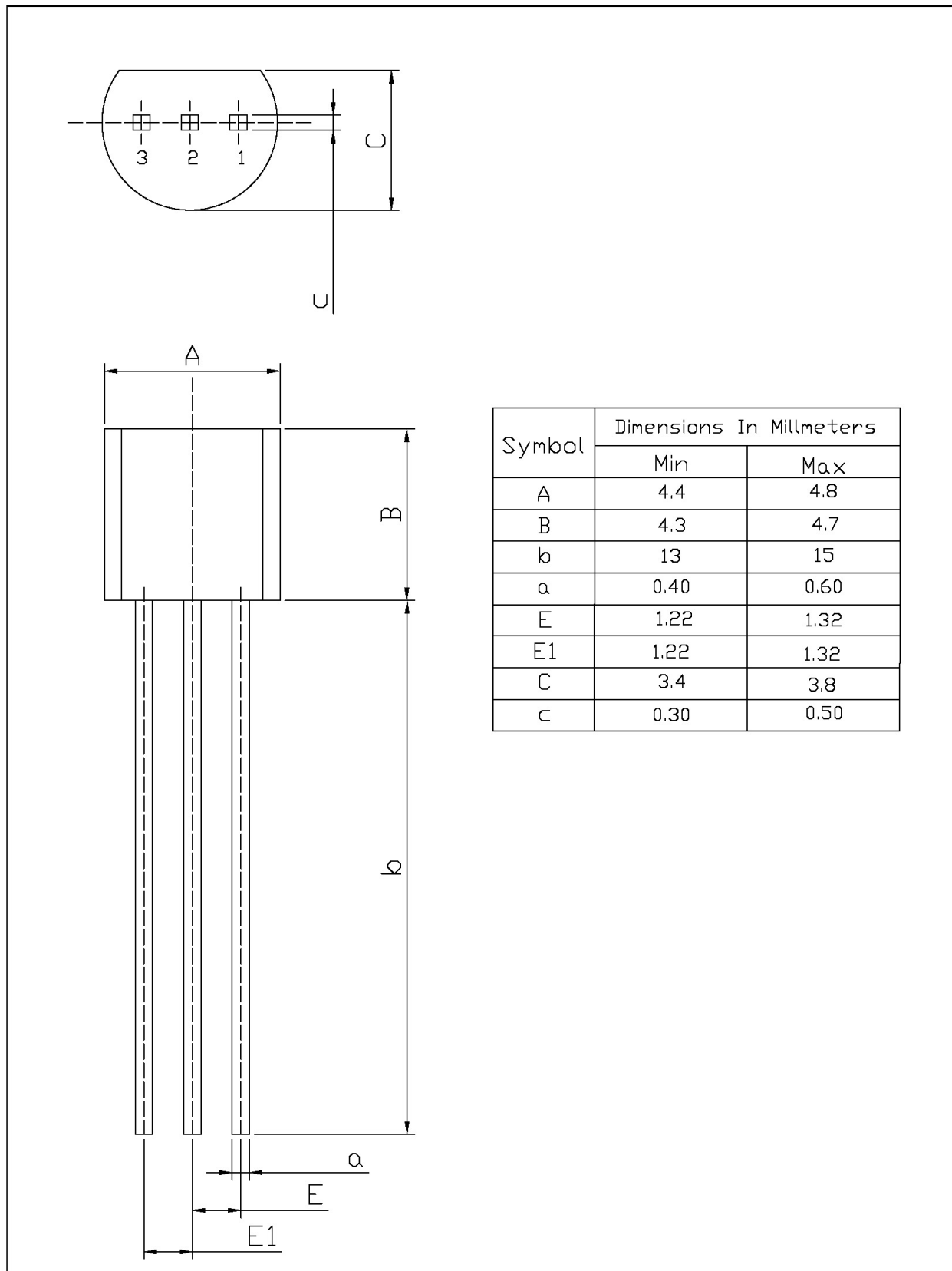
电参数曲线图 / Electrical Characteristic Curve



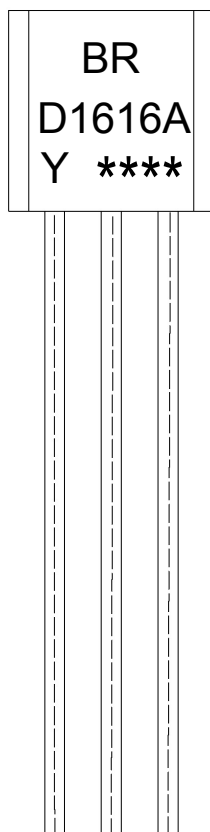
外形尺寸图 / Package Dimensions

TO-92

Unit: mm



印章说明 / Marking Instructions



说明：

BR: 为公司代码

D1616A : 为型号代码

Y: 为 h_{FE} 分档代码

**** : 为生产批号代码，随生产批号变化。

Note:

BR: Company Code.

D1616A: Product Type.

Y: h_{FE} Classifications Symbol

****: Lot No. Code,code change with Lot No.

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：270±5°C

时间：10±1 sec.

Temp:270±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

编带包装 / AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268

使用说明 / Notices