

Y / Descriptions

VRW0;<< MM QSQ æ M y s ll 1 Silicon NPN transistor in a SOT-89 Plastic Package.

- **È / Features**

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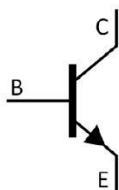
High current, low voltage.

v / Applications

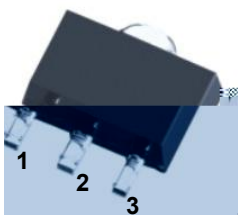
$$\mathfrak{M} \quad \mathfrak{N} \quad \cup \quad \mathfrak{W} \quad \mathfrak{Z}$$

Driver stages of audio and video amplifiers applications.

Equivalent Circuit



ã / ũ / Pinning



PIN1 $\times$ Base PIN 2 $\times$ Collector PIN 3 $\times$ Emitter

4. H 1 / Marking

$h_{FE(1)}$ Classifications	10	16
$h_{FE(1)}$ Range	63 160	100 250
Marking	HBK	HBL

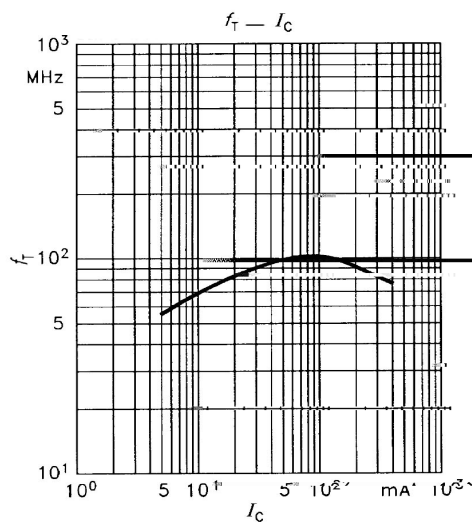
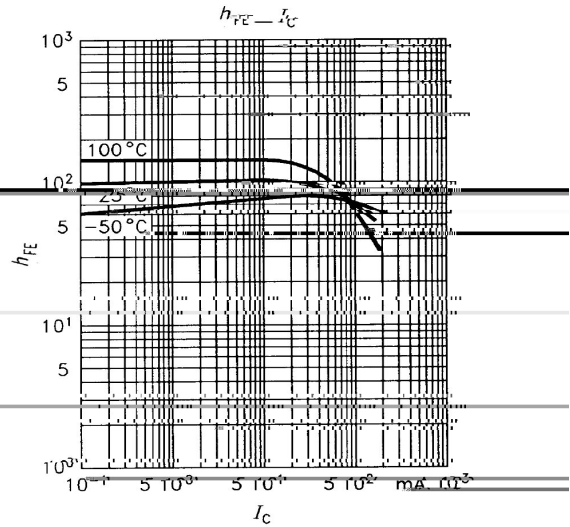
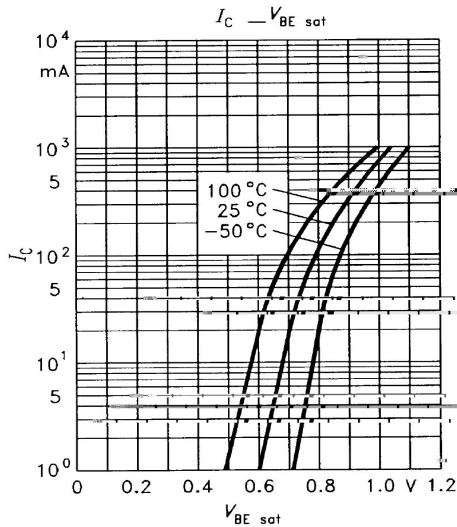
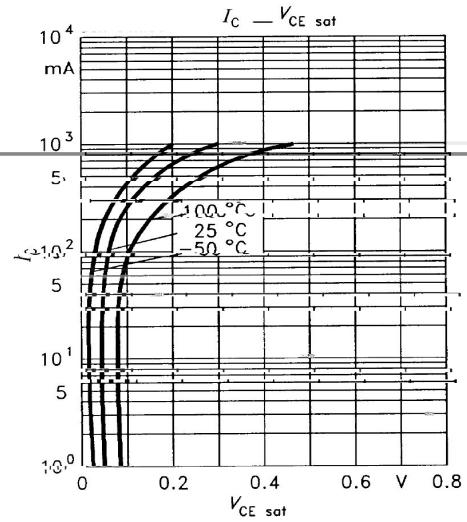
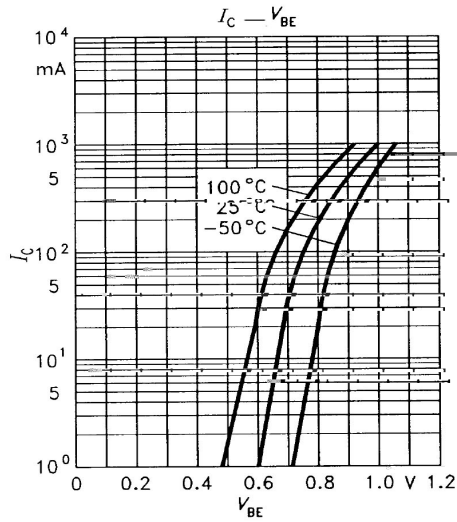
绝对最大额定值 (Ta=25℃)

参数 Parameter	符号 Symbol	额定值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	100	V
Collector to Emitter Voltage	V_{CEO}	80	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	1	A
Peak Collector Current	I_{CM}	1.5	A
Peak Base Current	I_{BM}	0.2	A
Collector Power Dissipation	$P_C(T_C=25^\circ\text{C})$	1.3	W
Storage Temperature Range	T_{stg}	-55 ~ 150	

电 气 特 性 (Ta=25℃)

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 to Base Breakdown Voltage	V_{CBO}	$I_C=100\mu\text{A}$ $I_E=0$	100			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=500\mu\text{A}$ $I_B=0$	80			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=100\mu\text{A}$ $I_C=0$	5.0			V
Collector Cut-Off Current	$I_{CBO(1)}$	$V_{CB}=30\text{V}$ $I_E=0$			0.1	μA
	$I_{CBO(2)}$	$V_{CB}=30\text{V}$ $I_E=0$ $T_J=125^\circ\text{C}$			10	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=5\text{V}$ $I_C=0$			0.1	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2\text{V}$ $I_C=150\text{mA}$	63		250	
	$h_{FE(2)}$	$V_{CE}=2\text{V}$ $I_C=5\text{mA}$	40			
	$h_{FE(3)}$	$V_{CE}=2\text{V}$ $I_C=500\text{mA}$	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}$ $I_B=50\text{mA}$			0.5	V
Base to Emitter Voltage	V_{BE}	$I_C=500\text{mA}$ $V_{CE}=2\text{V}$			1	V
Transition Frequency	f_T	$I_C=10\text{mA}$ $V_{CE}=5\text{V}$ $f=100\text{MHz}$		130		MHz
DC Current Gain Ratio Of The Complementary Pairs	$\frac{h_{FE1}}{h_{FE2}}$	$ I_C =150\text{mA}$ $ V_{CE} =2\text{V}$		1.3	1.6	

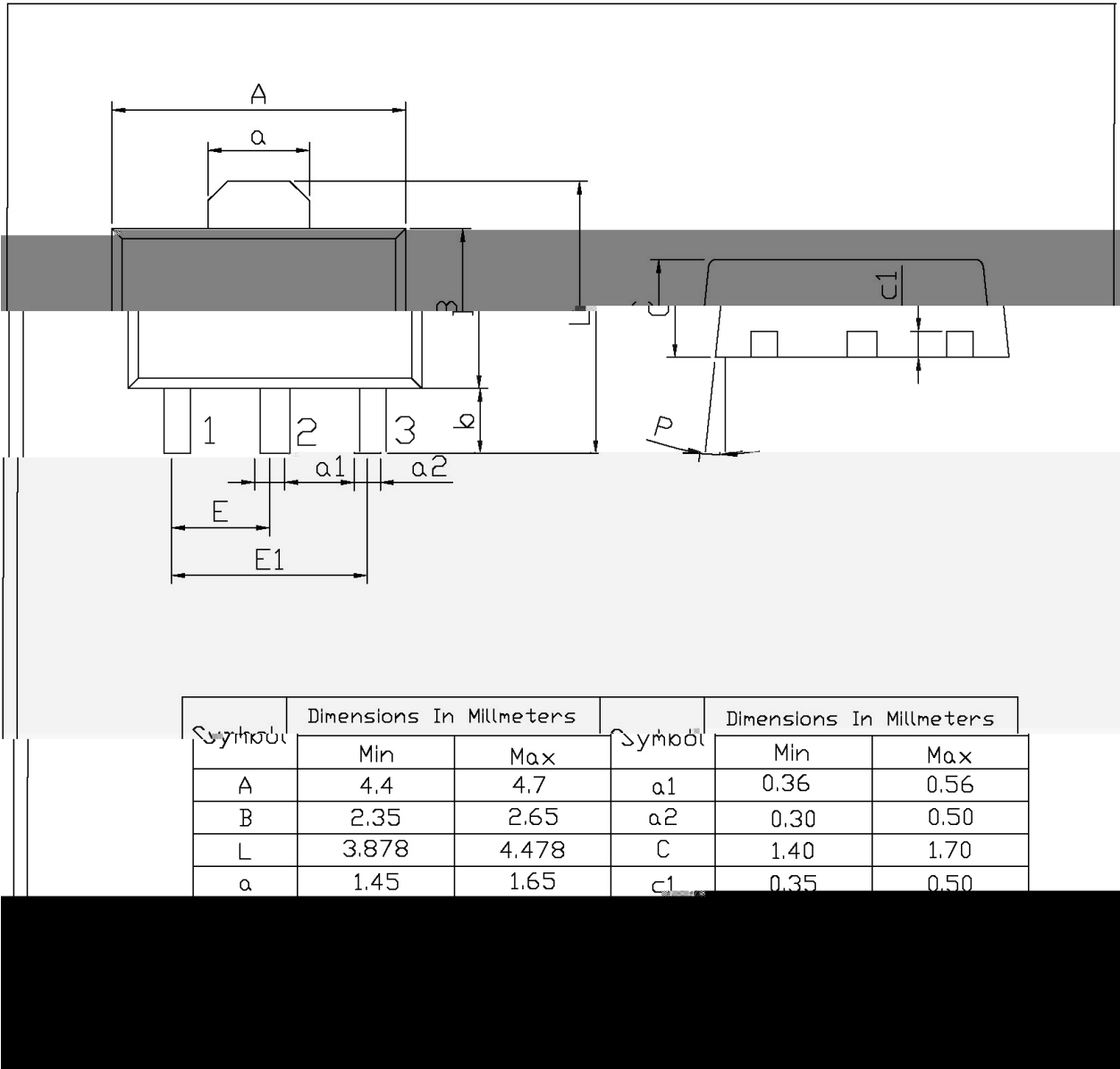
电 气 特 性 / Electrical Characteristic Curve



⌘ É Ò Ì ð / Package Dimensions

SOT-89

单位: mm

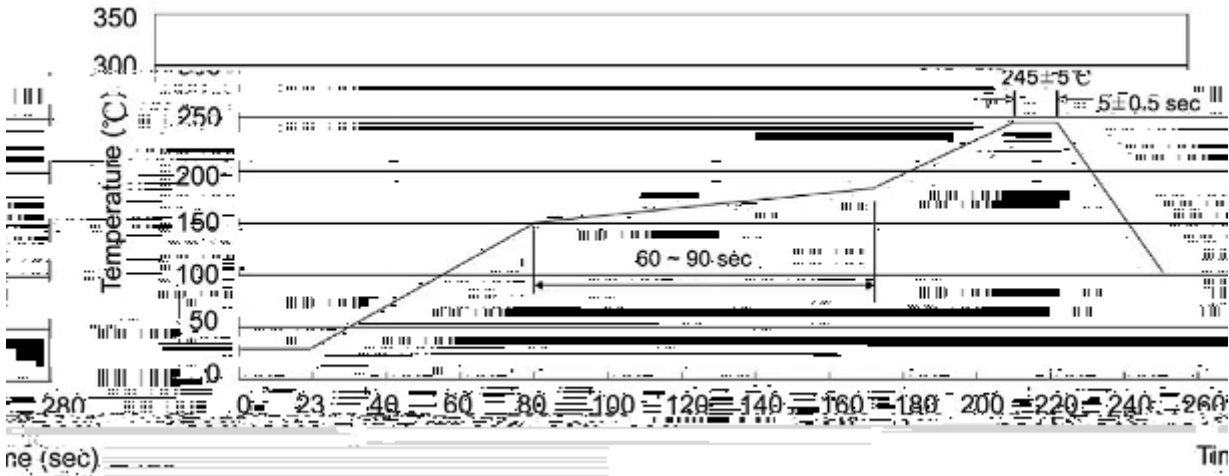


HX	$\mathbb{H}^3 \times \mathbb{P}^1$
BKX	$\mathbb{H}^3 \times \mathbb{P}^1$
--X	$\mathbb{H}^1 \times \mathbb{H}^1 \times \mathbb{P}^1 \times \mathbb{P}^1$

H: Company Code.
BK: Product Type.
**: Lot No. Code, code change with Lot No.



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

Note:

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3. Cooling Speed: 2~10 °C/sec.

Resistance to Soldering Heat Test Conditions

□ ý χ 260 ° 5 ± 'H χ 10 ° 1 sec. Temp.: 260±5 Time: 10±1 sec

Packaging SPEC.

□ ý γ / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	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-89	1,000	7	7,000	8	56,000	7 × 12	180×120×180	385×257×392

Notices