BCX56

Rev.E Mar.-2016

DATA SHEET

"Yت / Descriptions

VRW0;< ṂṂ Ŀ QSQ ÆṀ ɥ s Ⅱ ﾚ Silicon NPN transistor in a SOT-89 Plastic Package.

● È / Features

ƶ ɔ ╙ ɩ Ḩ ɔ я

High current, low voltage.

ע ڊ / Applications

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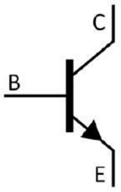
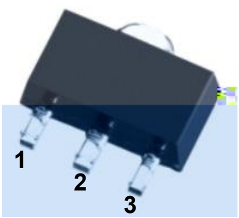
Driver stages of audio and video amplifiers applications.

Ŋ ڨ ᾇ ˸ ع / Equivalent Circuit



ẫ ʎ ʊ̃ / Pinning



PIN1 χ Base PIN 2 χ Collector PIN 3 χ Emitter

ȴ ʜ ב / Marking

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

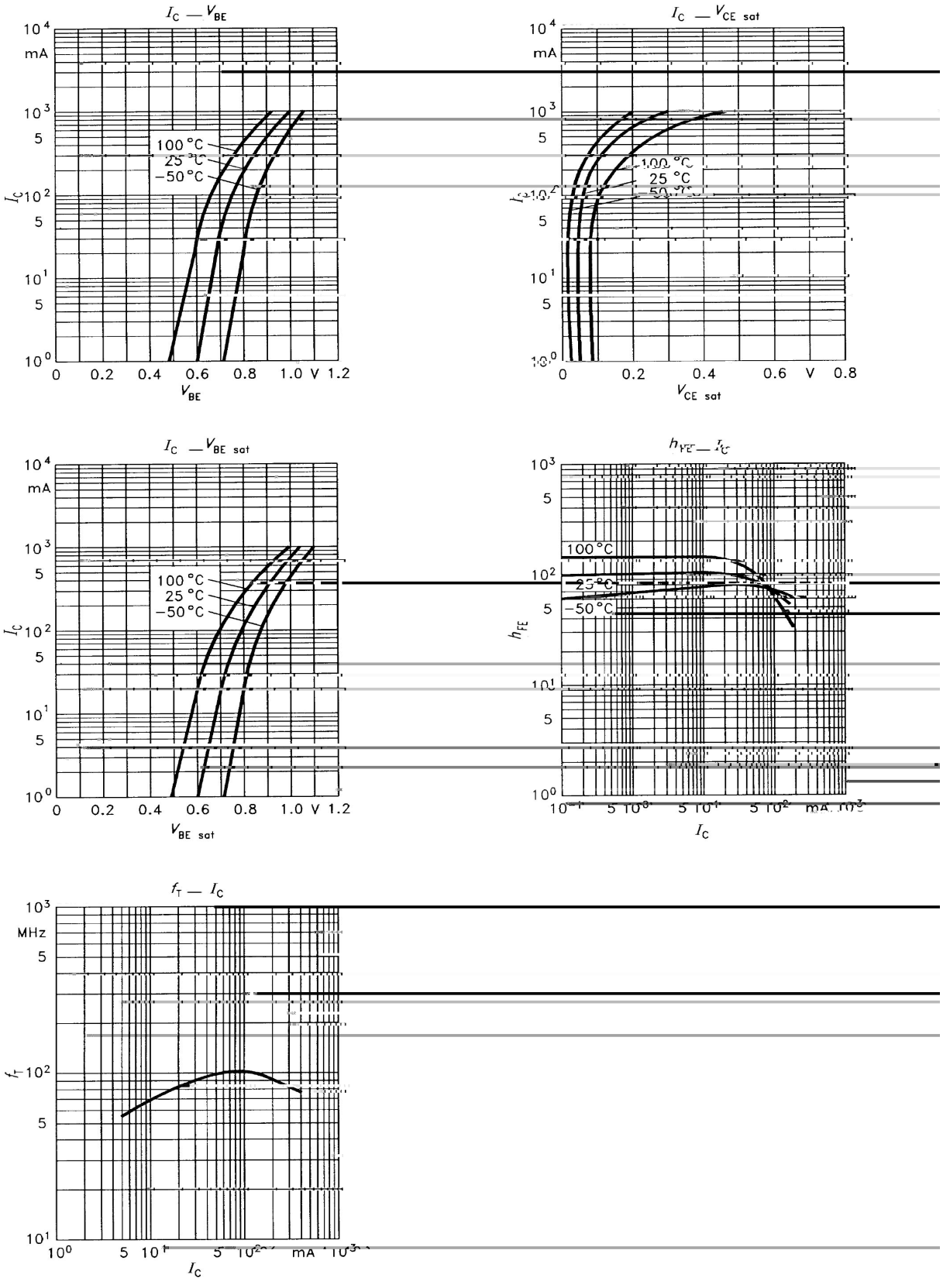
ώ ᷟ ᴲ ῼ / Absolute Maximum Ratings(Ta=25 ɹ)

ᴠ ῳ Parameter	ᶇ ᴺ Symbol	ῳ Ө Rating	ᴅ Ꞗ 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	$P_C(T_C=25\ )$	1.3	W
Storage Temperature Range	T_{stg}	-55 150	

ᵶ ᴧ ᴲ ῼ / Electrical Characteristics(Ta=25 ɹ)

ᴠ ῳ Parameter	ᶇ ᴺ Symbol	╜ ꜝ ᴛ Test Conditions	ώ ɳ Ө Min	Ɛ ʒ Ө Typ	ώ ᶻ Ө Max	ᴅ Ꞗ Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=100PA I_E=0	100			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=500PA I_B=0	80			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=100PA I_C=0	5.0			V
Collector Cut-Off Current	$I_{CBO(1)}$	V_{CB}=30V I_E=0			0.1	A
	$I_{CBO(2)}$	V_{CB}=30V I_E=0 T_j=125			10	A
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=5V I_C=0			0.1	A
DC Current Gain	$h_{FE(1)}$	V_{CE}=2V I_C=150mA	63		250	
	$h_{FE(2)}$	V_{CE}=2V I_C=5mA	40			
	$h_{FE(3)}$	V_{CE}=2V I_C=500mA	25			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA I_B=50mA			0.5	V
Base to Emitter Voltage	V_{BE}	I_C=500mA V_{CE}=2V			1	V
Transition Frequency	f_T	I_C=10mA V_{CE}=5V f=100MHz		130		MHz
DC Current Gain Ratio Of The Complementary Pairs	$\frac{h_{FE1}}{h_{FE2}}$	$\lvert I_C\rvert$=150mA $\lvert V_{CE}\rvert$=2V		1.3	1.6	

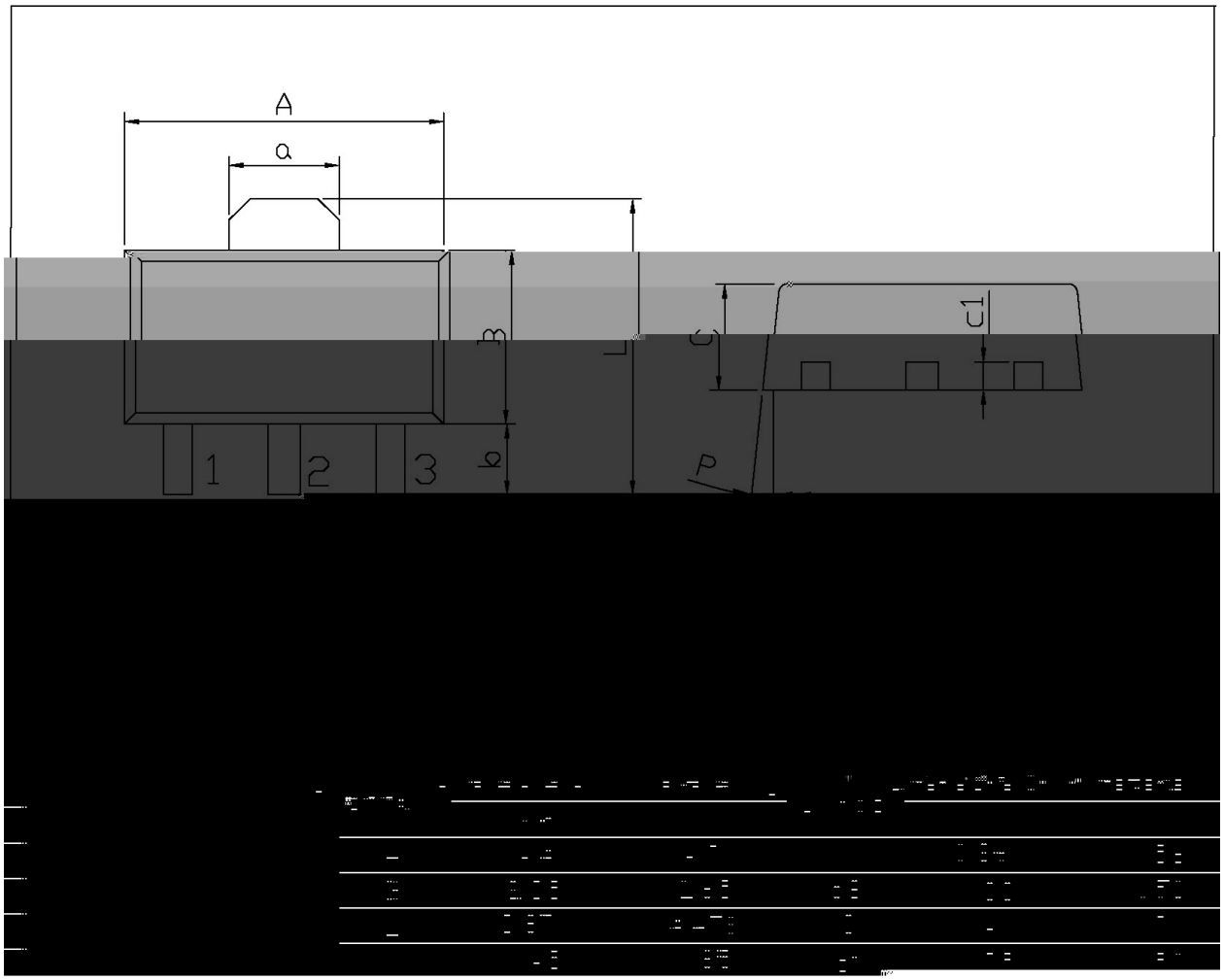
≠ ∃ ₹Ą´E ∀ ∱ / Electrical Characteristic Curve



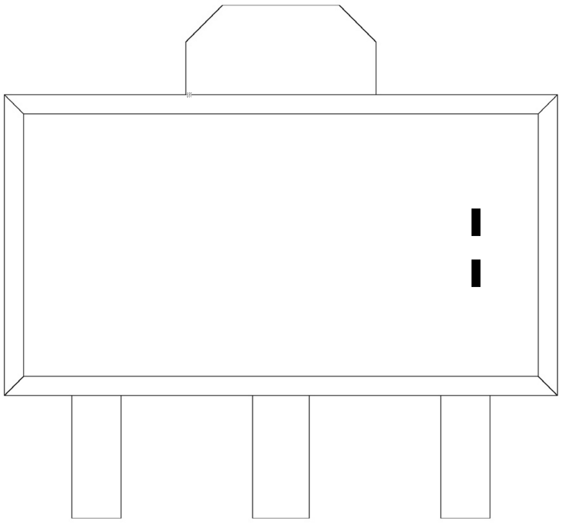
ᵘ ĖÒĻ ʃ / Package Dimensions

SOT-89

单位：mm



ł˛ ĿΏ / Marking Instructions



ب ˝ χ

H χ 㧒 ʡ ᴻ Ҧ

BK χ 㧒 ʒ ᴺ Ҧ

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Note:

H: Company Code.

BK: Product Type.

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

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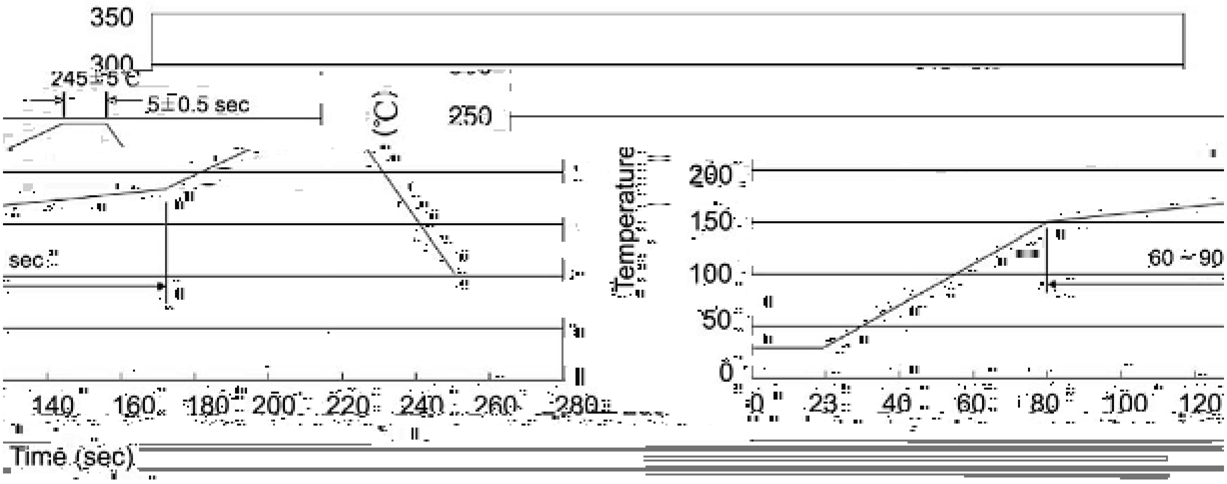

ب ˝ χ
1 ỉ♬□ ỷ 25 Ќ 150 ł ι `H ڕ 60 Ќ 90sec;
2 ŠӨ□ ỷ 245 ° 5 ł ι `H ڕ `Y ﾑ ㈲ 5 ° 0.5sec;
3 ỉ˙ Ỵ¸ ɔ ቃ ỷ ㈲ 2 Ќ 10 ł /sec.

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

˧ ü զ ﾆ `Y Ţ / Resistance to Soldering Heat Test Conditions

□ ỷ χ 260 ° 5 ł `H ڕ χ 10 ° 1 sec.

Temp.:260±5 Time:10±1 sec

ɟ ㅌ ≺— / Packaging SPEC.

ɷ` ɣ ㅌ / 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

ä ⅴ ʟΏ / Notices