/ Descriptions

SOT-89 NPN Silicon NPN transistor in a SOT-89 Plastic Package.

/ Features

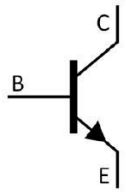
Small size making it easy to provide high-density. Halogen-free Product.

/ Applications

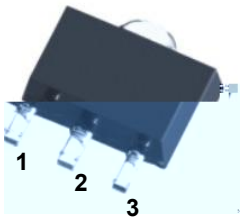
27MHz CB

27MHz CB transceiver driver applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ Marking

h_{FE} Classifications Symbol	D	E	F
h_{FE} Range	60 120	100 200	160 320
Marking	HCHD※	HCHE※	HCHF※

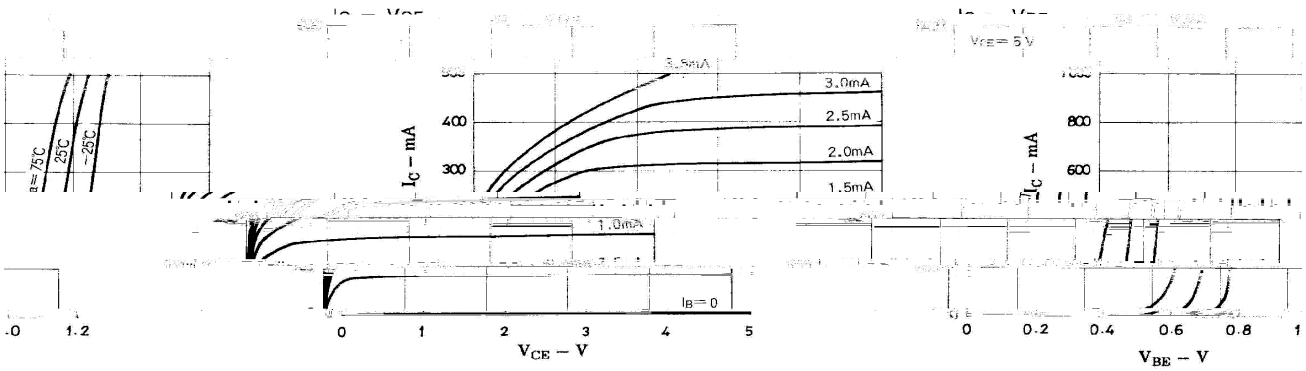
/ Absolute Maximum Ratings(Ta=25)

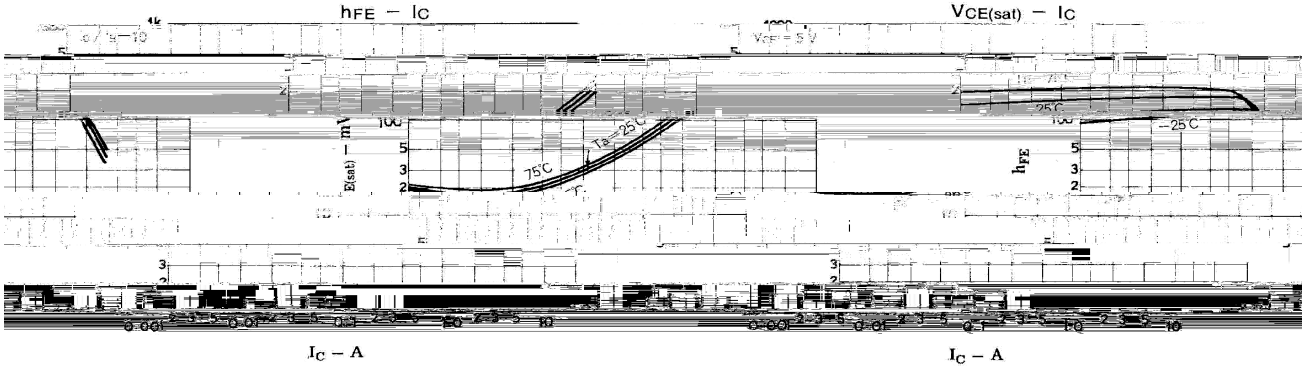
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	75	V
Collector to Emitter Voltage	V_{CEO}	45	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	1.0	A
Collector Current – Continuous(Pulse)	I_{CP}	1.5	A
Collector Power Dissipation	P_C	500	mW
Collector Power Dissipation	P_C(Tc=25)	1.3	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

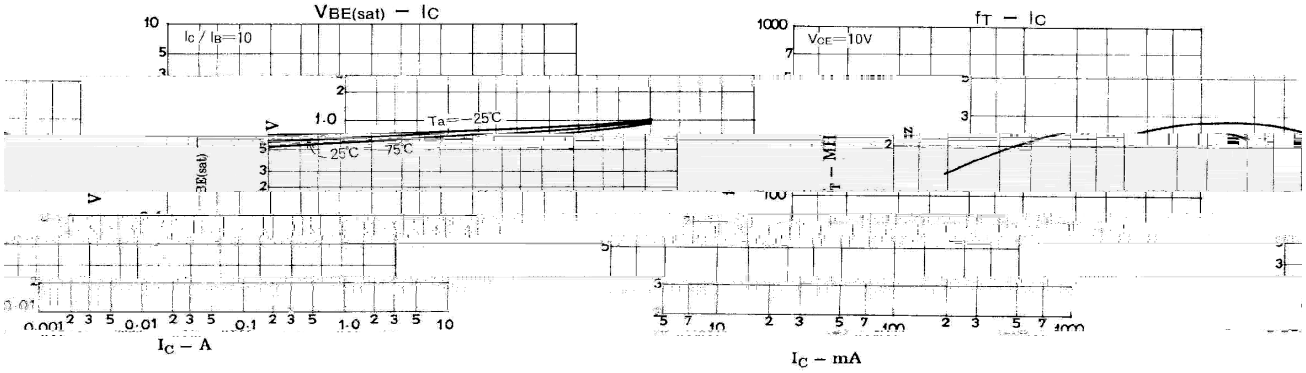
/ Electrical Characteristics(Ta=25)

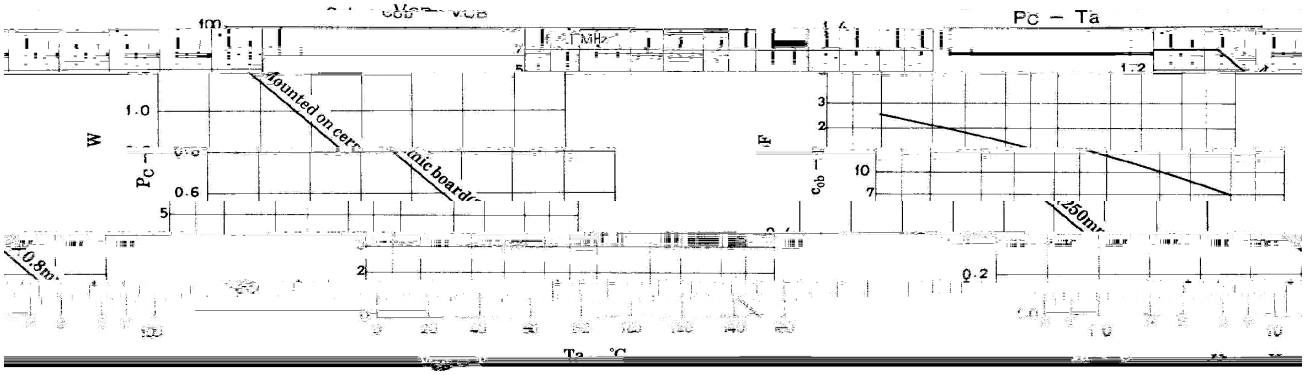
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA I_E=0	75			V
Collector to Emitter Breakdown Voltage	V_{CER}	I_C=1.0mA R_{BE}=150Ω	75			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA R_{BE}=∞	45			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	5.0			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=40V I_E=0			1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	V_{EB}=4.0V I_C=0			1.0	μA
DC Current Gain	h_{FE}	V_{CE}=5.0V I_C=500mA	60		320	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=500mA I_B=50mA		0.2	0.6	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=500mA I_B=50mA		0.9	1.2	V
Transition Frequency	f_T	V_{CE}=10V I_C=50mA	180	250		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V f=1.0MHz		13		pF

/ Electrical Characteristic Curve





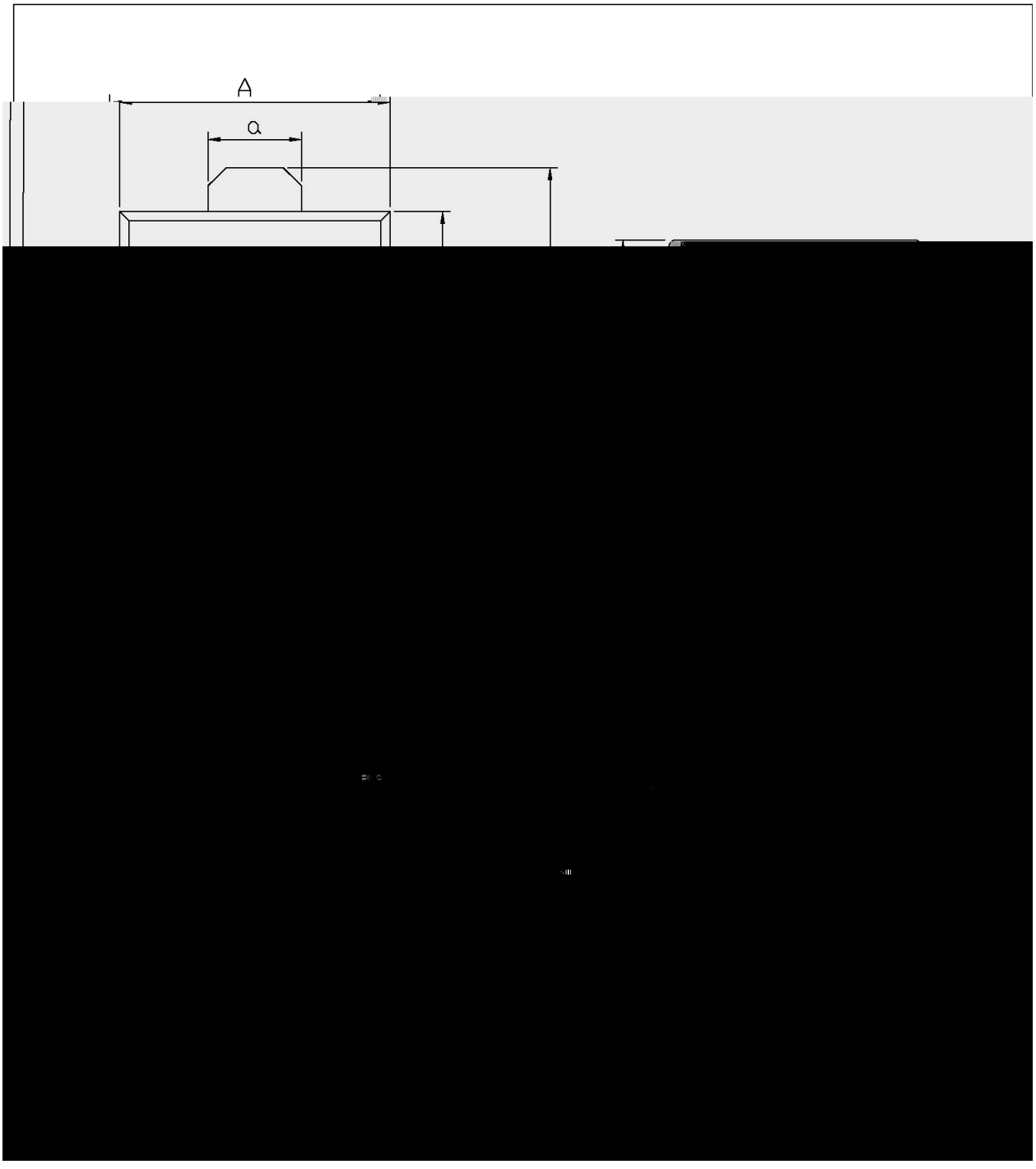




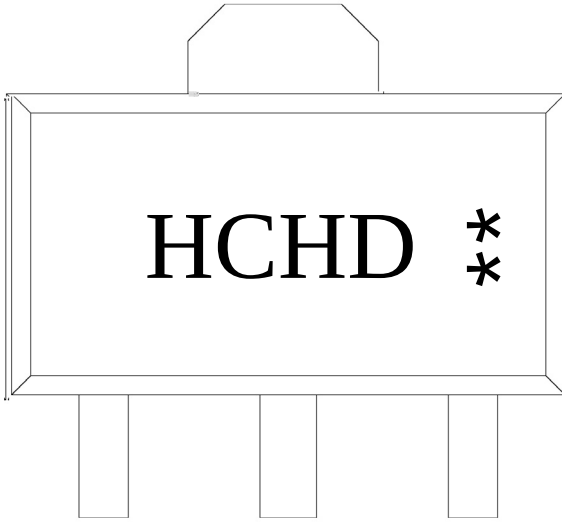
/ Package Dimensions

SOT-89

单位：mm



/ Marking Instructions



H

CH

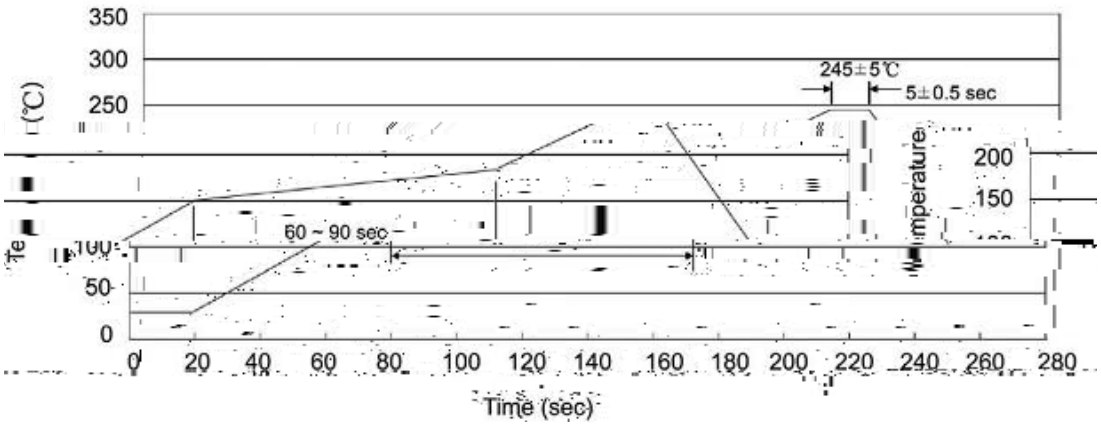
D:

**

Note:

H:	Company Code.
CH:	Product Type.
D:	h_{FE} Classifications Symbol
**:	Lot No. Code, code change with Lot No.

( ) /



Note:

1 150 180 60 90sec;
1.Preheating:150~180 , 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^3)		
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱		盒	箱

/ Notices