/ Descriptions

Silicon PNP transistor in a SOT-23 Plastic Package.

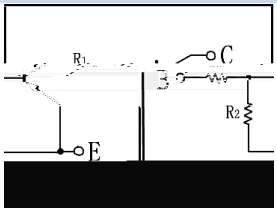
/ Features

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process.

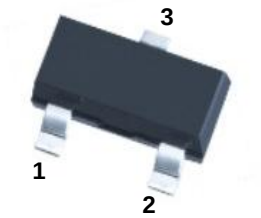
/ Applications

Switching, inverter circuit, interface circuit and driver circuit applications.

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

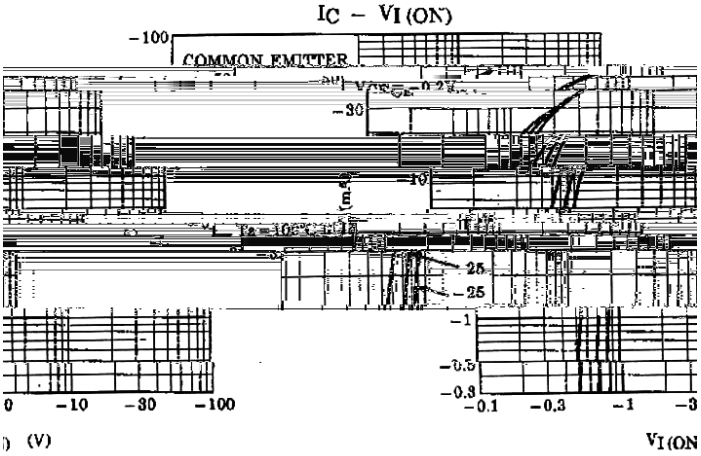
/ h_{FE} Classifications & Marking

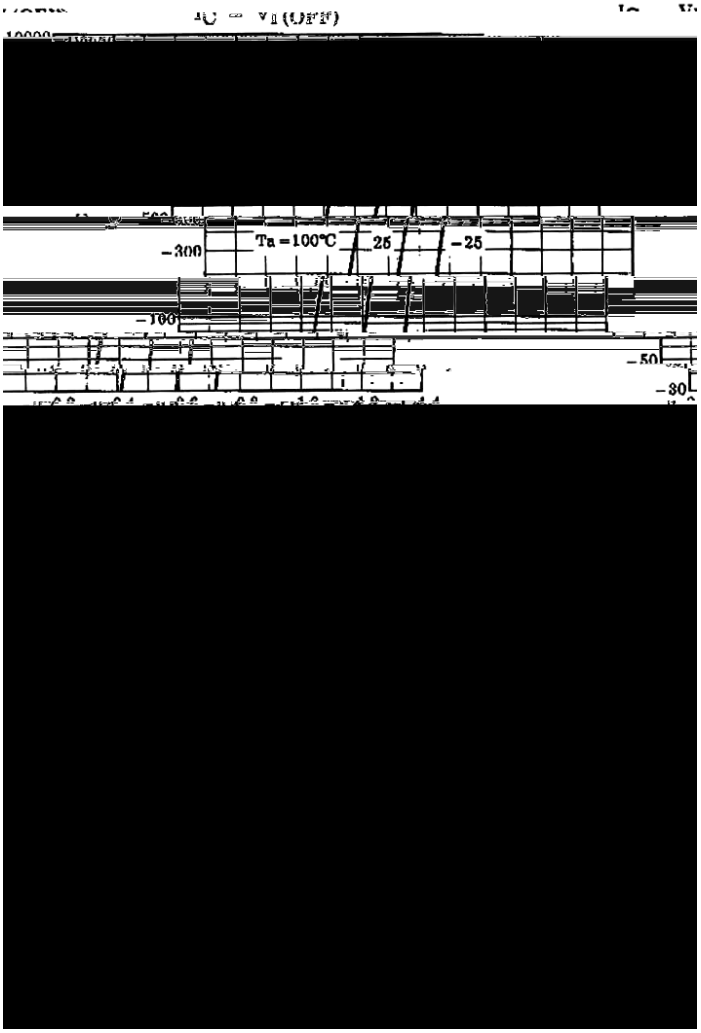
h_{FE} Range	>80
Marking	HE32

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	-100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{I(ON)}$	V_{CE}=-0.2V I_C=-5.0mA	-0.6		-1.1	V
Input Voltage	$V_{I(OFF)}$	V_{CE}=-5.0V I_C=-0.1mA	-0.5		-0.8	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-50V I_E=0			-0.1	A
Collector Cut-Off Current	I_{CEO}	V_{CE}=-50V I_B=0			-0.5	A
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-5.0V I_C=0	-0.078		-0.145	mA
DC Current Gain	h_{FE}	V_{CE}=-5.0V I_C=-10mA	80			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-5.0mA I_B=-0.25mA		-0.1	-0.3	V
Transition Frequency	f_T	V_{CE}=-10V I_C=-5.0mA		200		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=-10V I_E=0mA f=1.0MHz		3.0	6.0	pF
Input Resistor	R_1		1.54	2.2	2.86	K
Resistor ratio	R_2/R_1		19.4	21	23.7	

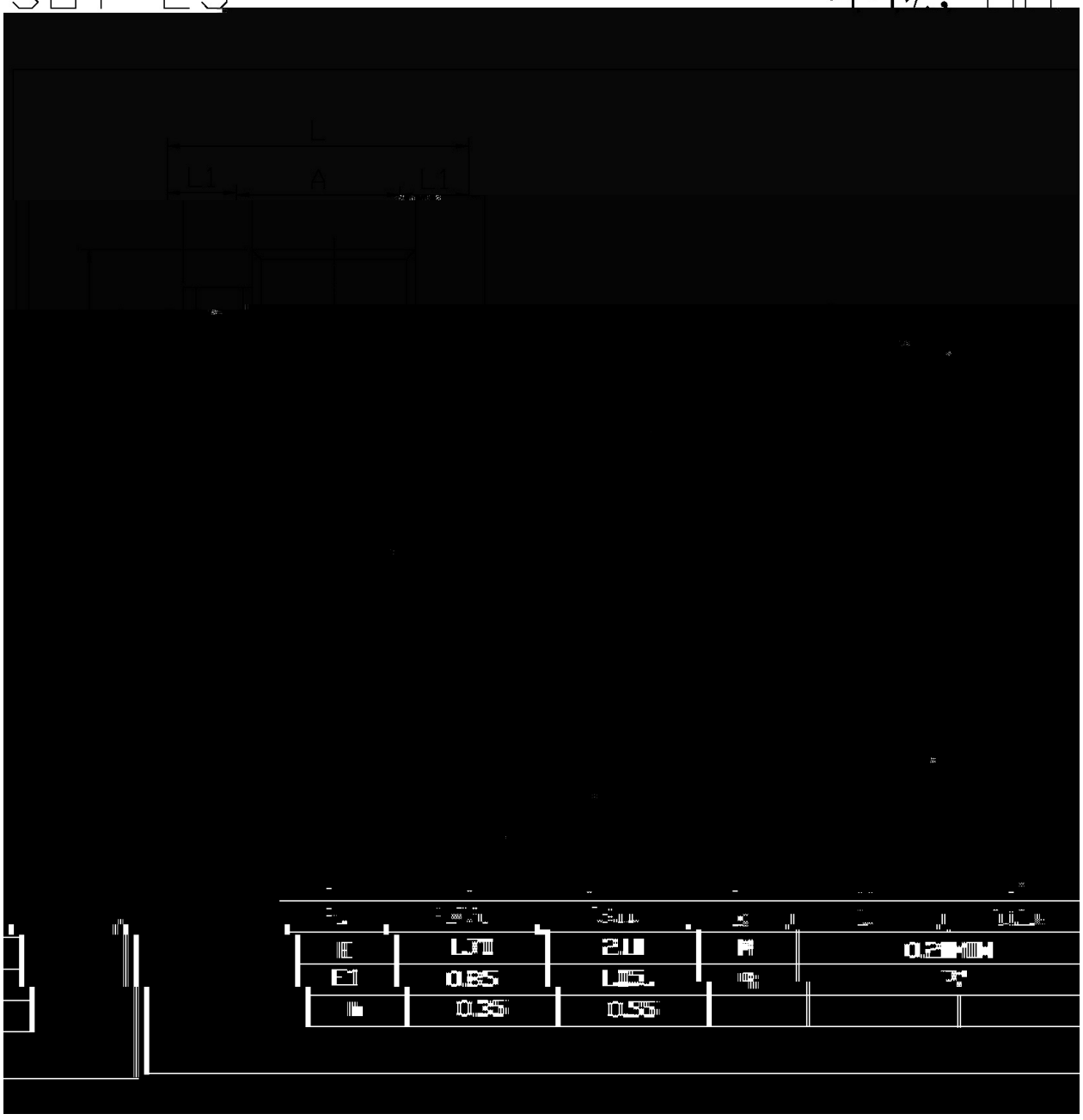
/ Electrical Characteristic Curve

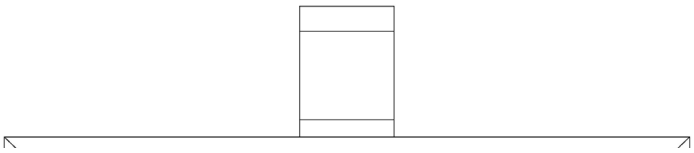




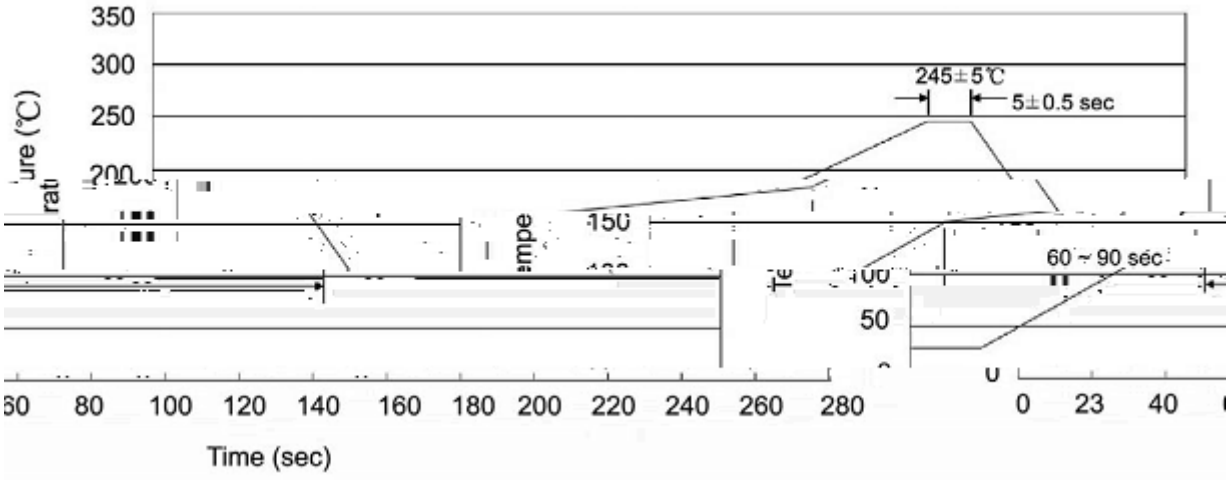
/ Package Dimensions

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^3)	
	只 卷盘	卷盘 盒	只 盒	盒 箱	只 箱	盒	箱