/ Descriptions

SOT-23 PNP Silicon PNP transistor in a SOT-23 Plastic Package.

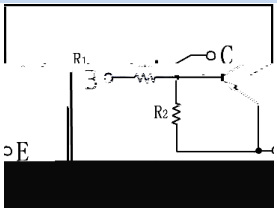
/ Features

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

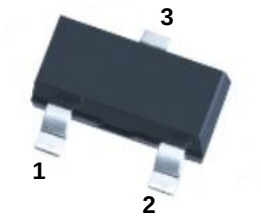
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN 1 Base PIN 2 Emitter PIN 3 Collector

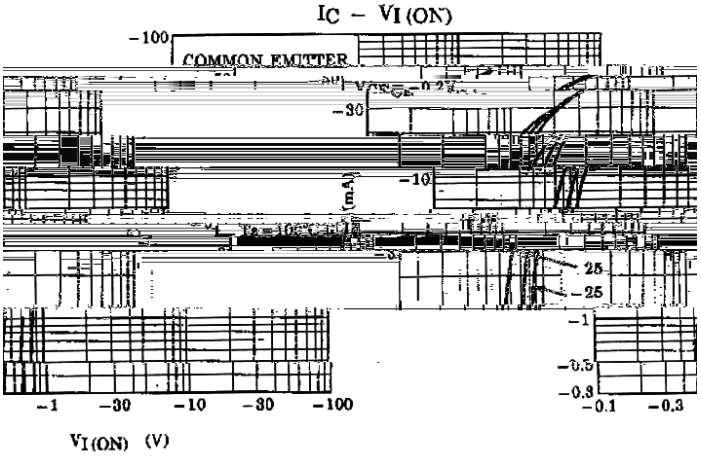
/ h_{FE} Classifications & Marking

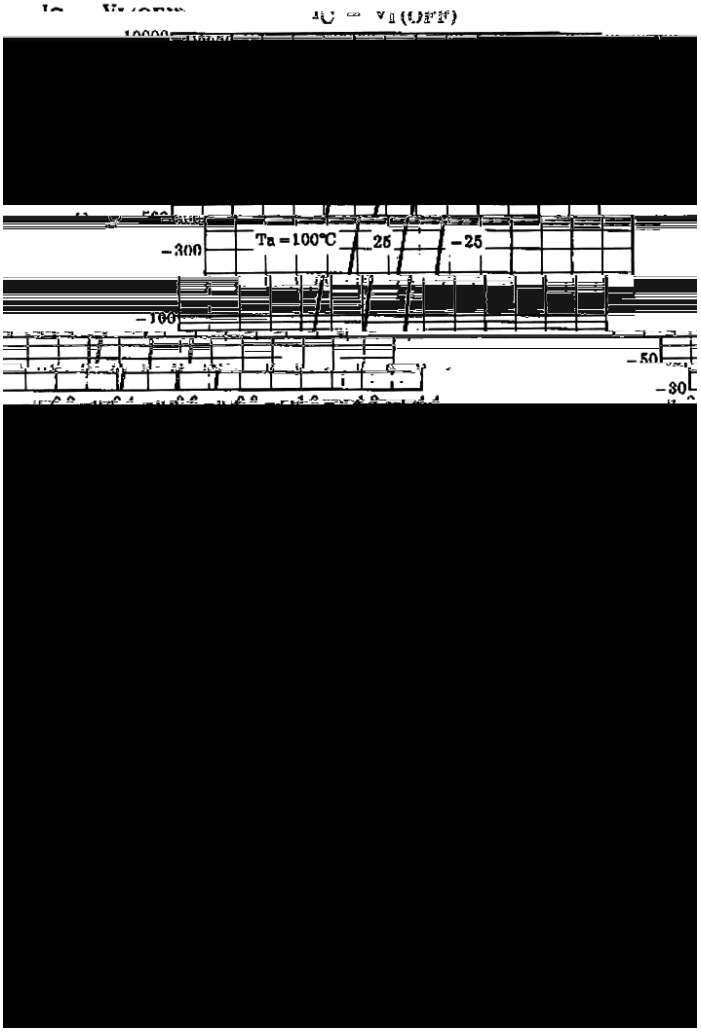
h_{FE} Range	>80
Marking	HE32

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

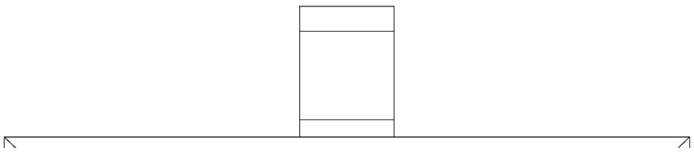




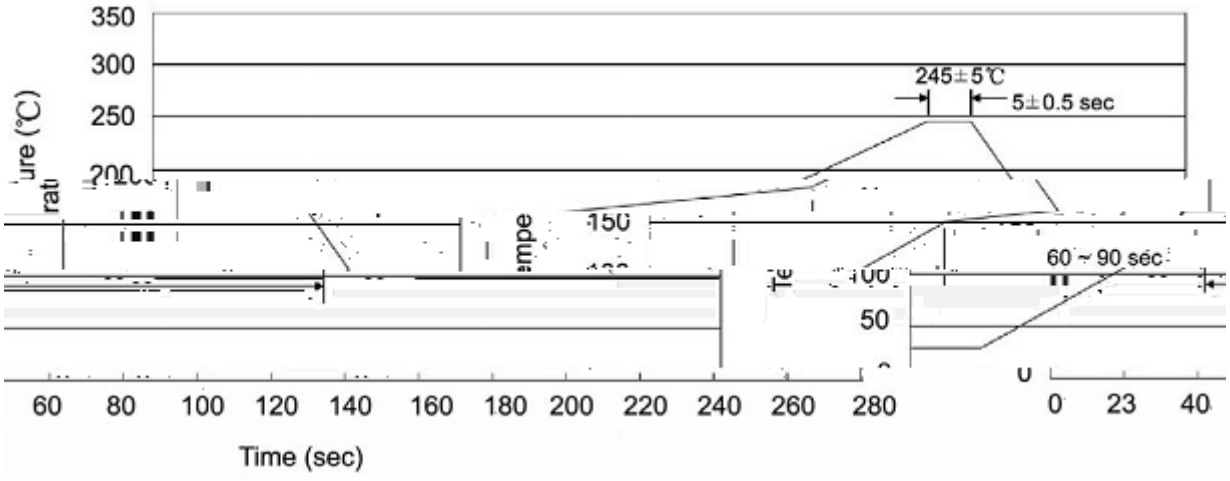
/ Package Dimensions

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)		
	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