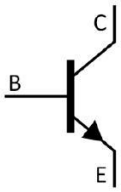
SOT-23 NPN Silicon NPN transistor in a SOT-23 Plastic Package.

EB , (150) I_B=5mA 1

High V_{EBO},high reverse h_{FE}(typ.150,V_{CE}=-2V,I_C=-2mA),low on resistance(R_{on}=1 ,I_B=5mA).

For muting and switching applications.



PIN 1 Base PIN 2 Emitter PIN 3 Collector

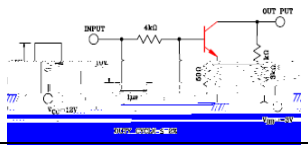
/ h_{FE} Classifications & Marking

h_{FE} Classifications
Symbol

/ Absolute Maximum Ratings(Ta=25)

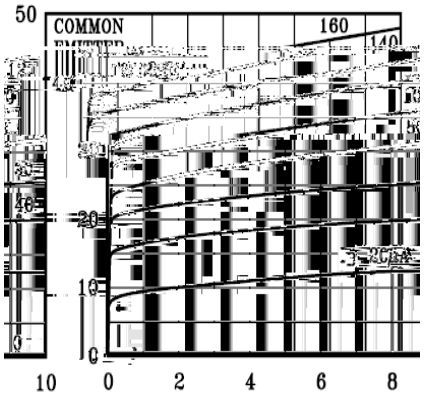
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	25	V
Collector Current	I_C	300	mA
Base Current	I_B	60	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

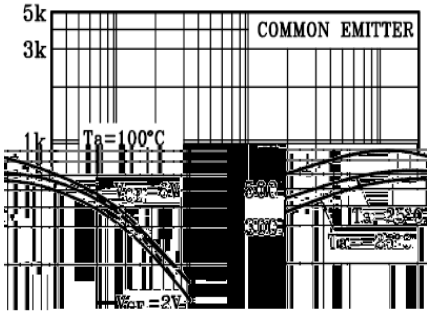
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CBO}	I_C=100uA	50			V
Collector to Base Breakdown Voltage	V_{CEO}	I_C=500uA	20			V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=100uA	25			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=50V I_E=0			0.1	A
Emitter Cut-Off Current	I_{EBO}	V_{EB}=25V I_C=0			0.1	A
DC Current Gain	h_{FE}	V_{CE}=2.0V I_C=4.0mA	200		1200	
Base-Emitter Voltage	V_{BE}	V_{CE}=2.0V I_C=4.0mA		0.61		V
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=30mA I_B=3.0mA		0.042	0.3	V
Transition Frequency	f_T	V_{CE}=6.0V I_C=4.0mA		30		MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz		4.8	7	pF
Turu-On Time	T_{on}			160		nS
Storage Time	T_{stg}			500		
Fall Time	t_f			130		

/ Electrical Characteristic Curve

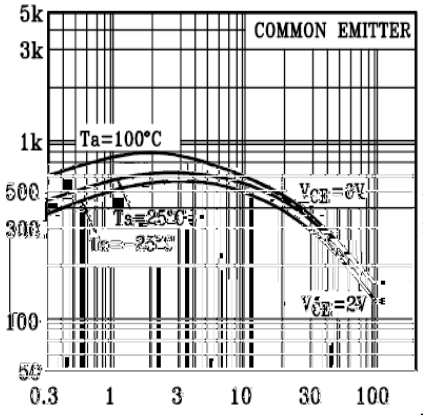
I_C – V_{CE}



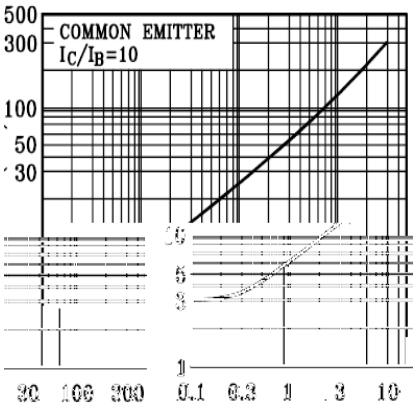
h_{FE} – I_C



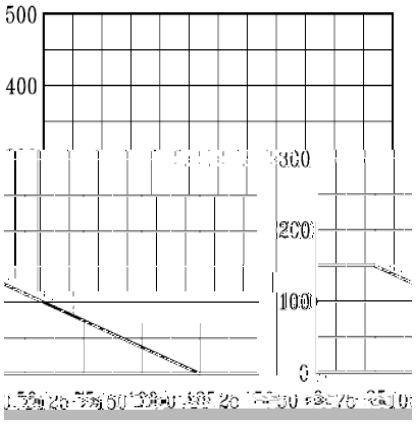
h_{FE} – I_C



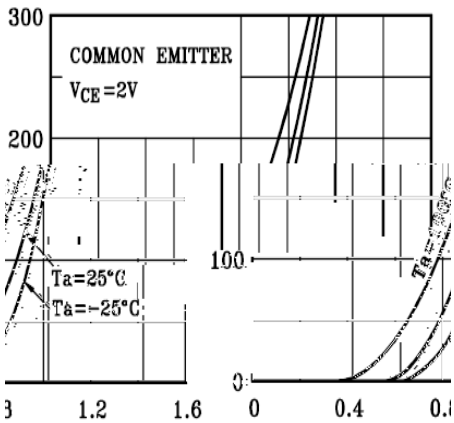
$V_{CE(sat)}$ – I_C



P_C – Ta

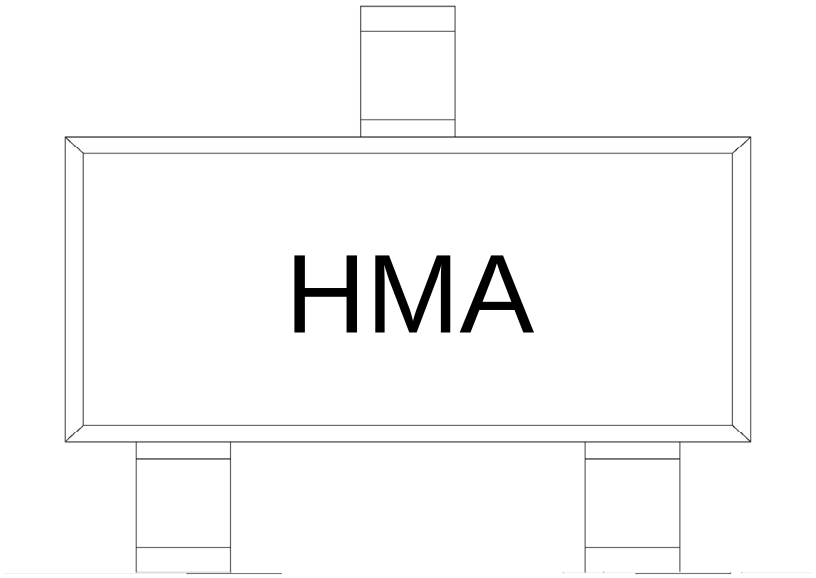


I_C – V_{BE}



/ Package Dimensions

/ Marking Instructions



H

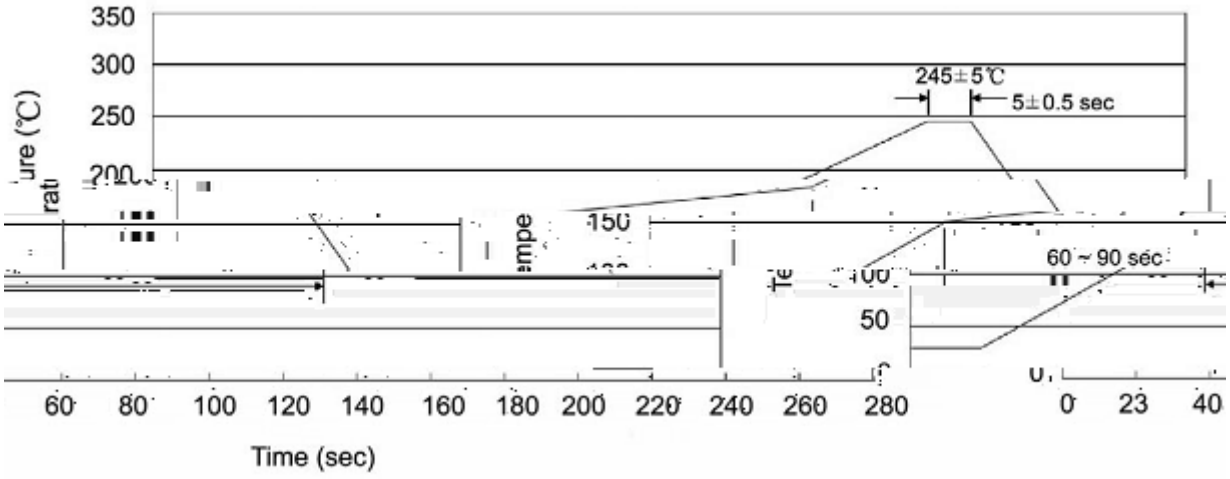
M

A h_{FE}

Note:

H	Company Code
M	Product Type
A	h_{FE} Classifications Symbol

( ) / 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
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices