

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

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

For muting and switching applications.



PIN 1 Base          PIN 2 Emitter          PIN 3 Collector

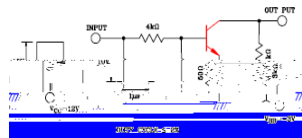
### / $h_{FE}$ Classifications & Marking

$h_{FE}$  Classifications  
Symbol

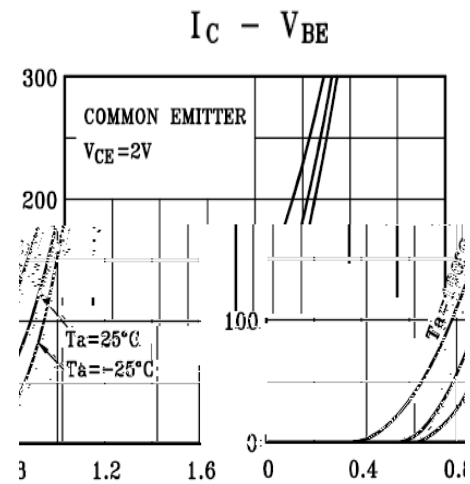
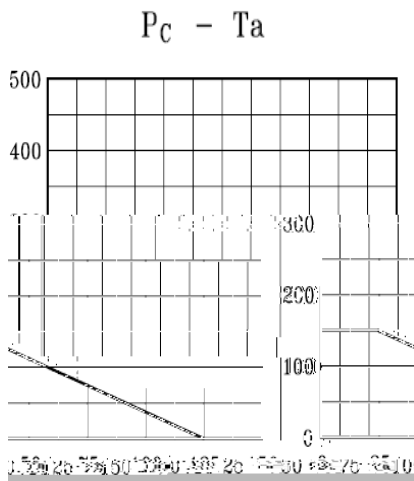
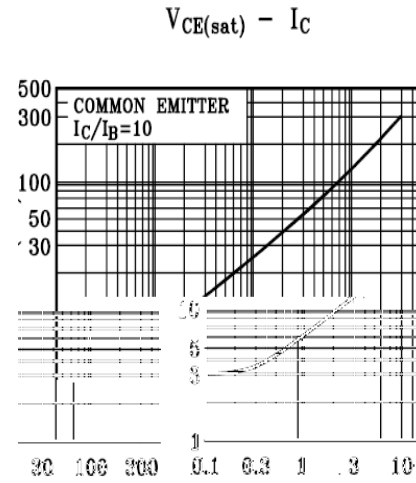
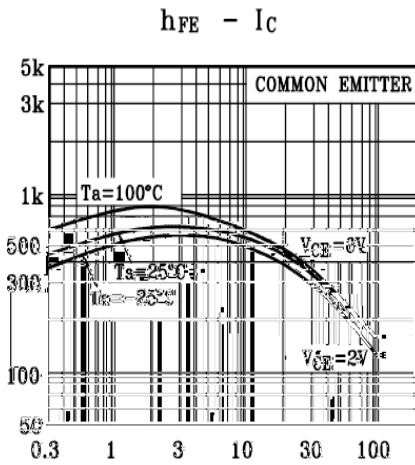
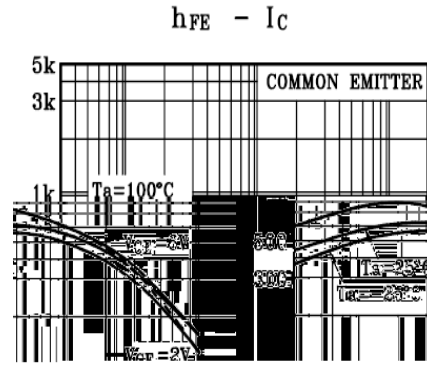
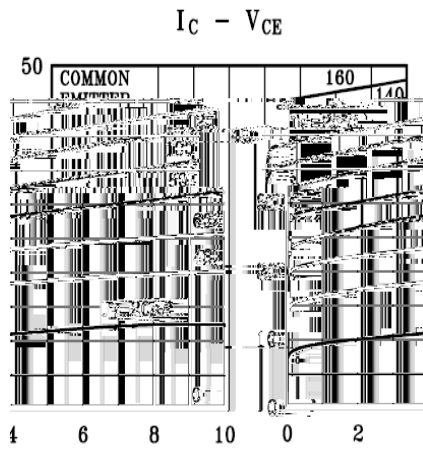
**/ Absolute Maximum Ratings(Ta=25 )**

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 )**

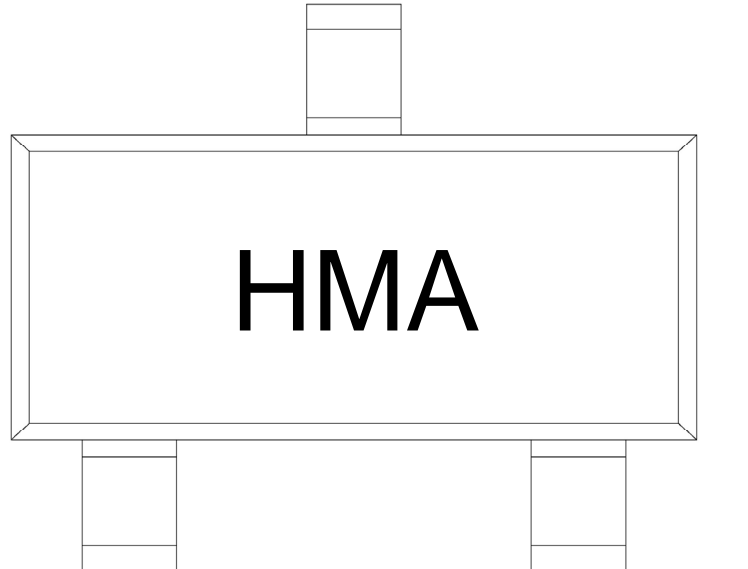
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{CBO}$	$I_C=100\mu A$	50			V
Collector to Base Breakdown Voltage	$V_{CEO}$	$I_C=500\mu A$	20			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=100\mu A$	25			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=50V$ $I_E=0$			0.1	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=25V$ $I_C=0$			0.1	$\mu A$
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



**/ Package Dimensions**

/ Marking Instructions



H

M

A             $h_{FE}$

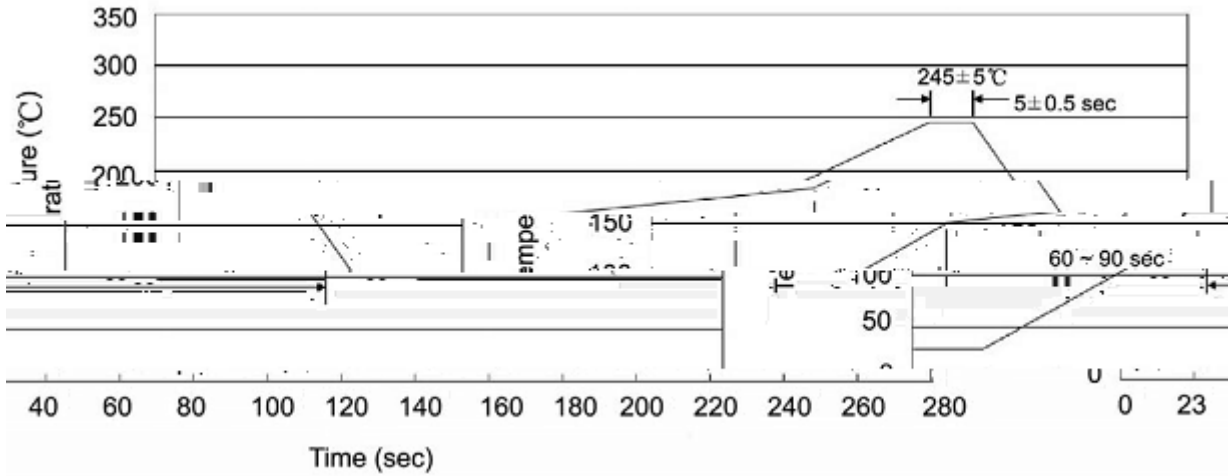
Note:

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 <sup>3</sup> )		
	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