

Silicon NPN transistor in a SOT-23 Plastic Package.

High Collector-Emitter Voltage.

High voltage application.



PIN1 Base PIN 2 Emitter PIN 3 Collector

h_{FE} Range	30~200
Marking	3DH

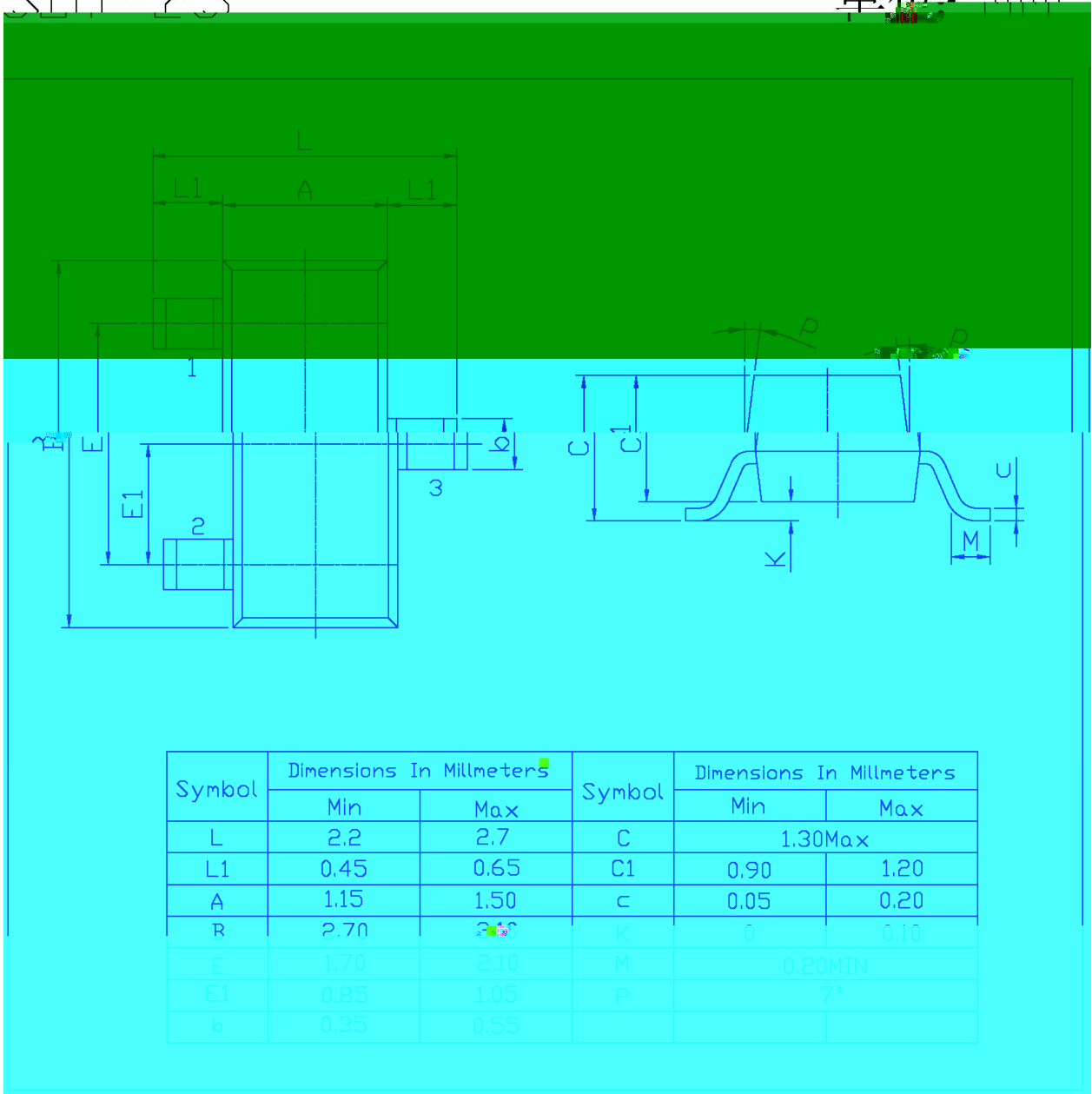
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	350	V
Collector to Emitter Voltage	V_{CEO}	350	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	500	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=100\text{ A}$ $I_E=0$	350			V
Collector to Emitter Breakdown Voltage	$*V_{CEO}$	$I_C=1.0\text{mA}$ $I_B=0$	350			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=10\text{ A}$ $I_C=0$	6.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=250\text{V}$ $I_E=0$			0.05	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4.0\text{V}$ $I_C=0$			0.05	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=10\text{V}$ $I_C=30\text{mA}$	30		200	
	$*h_{FE(2)}$	$V_{CE}=10\text{V}$ $I_C=100\text{mA}$	15			
	$h_{FE(3)}$	$V_{CE}=10\text{V}$ $I_C=1.0\text{mA}$	20			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=10\text{mA}$ $I_B=1.0\text{mA}$			0.3	V
	$V_{CE(sat)}$	$I_C=50\text{mA}$ $I_B=5.0\text{mA}$			1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=10\text{mA}$ $I_B=1.0\text{mA}$			0.75	V
	$V_{BE(sat)}$	$I_C=30\text{mA}$ $I_B=3.0\text{mA}$			0.9	V
Base-Emitter On Voltage	$*V_{BE(ON)}$	$V_{CE}=10\text{V}$ $I_C=100\text{mA}$			2.0	V
Transition Frequency	f_T	$V_{CE}=20\text{V}$ $f=20\text{MHz}$ $I_C=10\text{mA}$	40		200	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=20\text{V}$ $f=1\text{MHz}$ $I_E=0$			6.0	pF

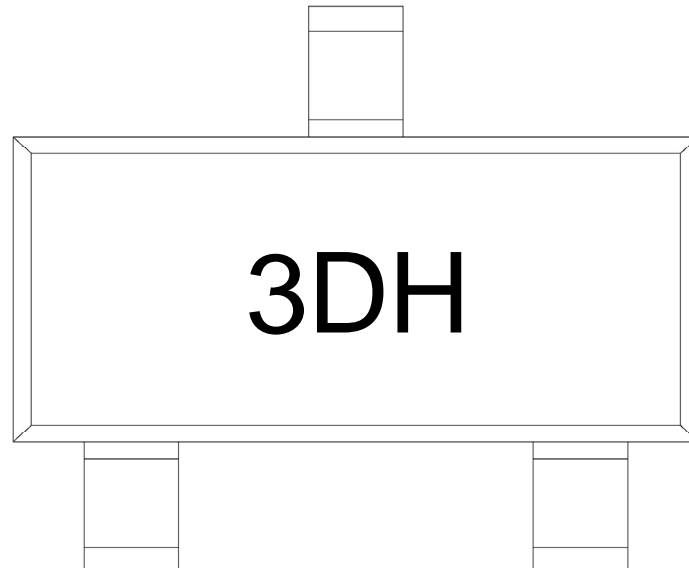
*pulse test: pulse width 300 S, duty cycle 2.0%.

SOT-23

单位: mm



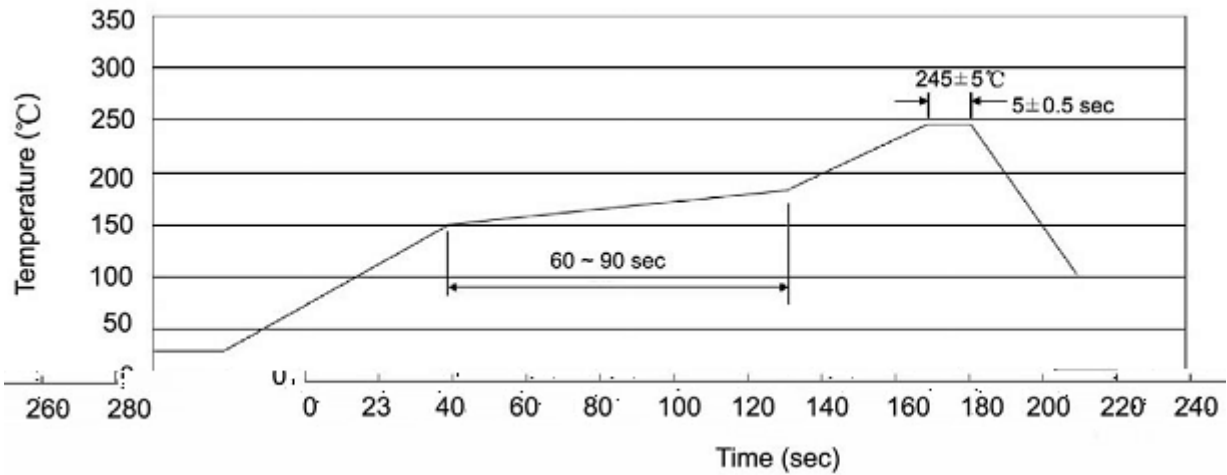
Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.00	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			



Note:

Product Type Code

Company Code

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. |

260 5 10 1 sec. Temp.:260 5 Time:10 1 sec

/ 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