

/ Descriptions

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

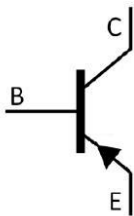
/ Features

, h_{FE}
Low saturation voltage, excellent h_{FE} linearity and high h_{FE} .

/ Applications

Output stage of audio amplifier, voltage regulator, DC-DC converter and relay driver.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	Q	P	E
h_{FE} Range	100~200	160~320	200~400
Marking	H72Q	H72P	H72E

/ Absolute Maximum Ratings(Ta=25)

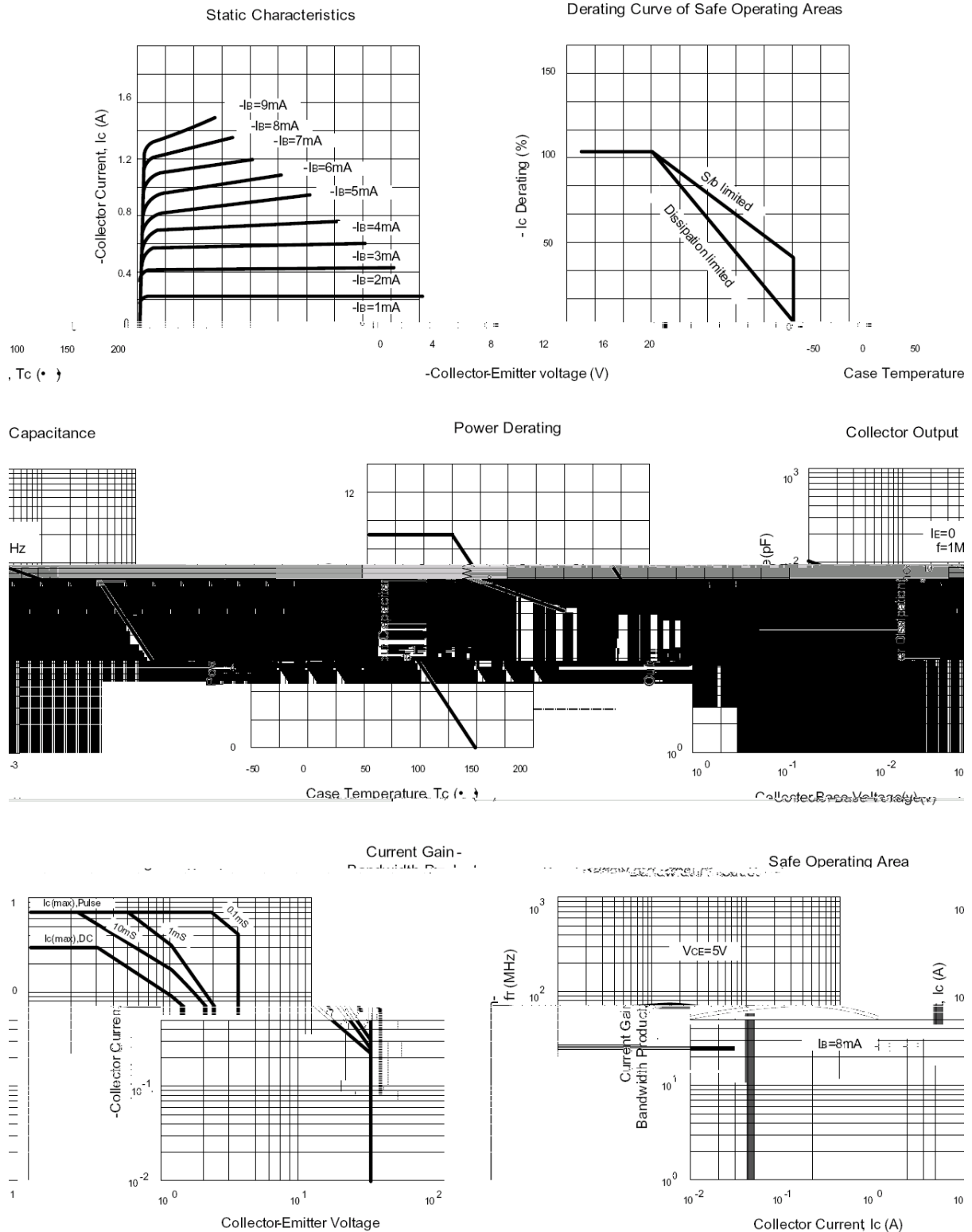
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-30	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current - DC	I_C	-3	A
Collector Current - Pulse	I_{CP}	-7	A
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-100\mu A$ $I_E=0$	-40			V
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $I_B=0$	-30			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-100\mu A$ $I_C=0$	-5			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-30V$ $I_E=0$			-1.0	μA
Emitter Cut-Off Current	I_{CEO}	$V_{CB}=-30V$ $I_B=0$			-1.0	μA
Emitter Base Cut-Off Current	I_{EBO}	$V_{EB}=-3.0V$ $I_C=0$			-1.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-2.0V$ $I_C=-1.0A$	100	150	400	
	$h_{FE(2)}$	$V_{CE}=-2.0V$ $I_C=-20mA$	30	200		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-2.0A$ $I_B=-20mA$		-0.3	-0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-2.0A$ $I_B=-20mA$		-1.0	-2.0	V
Transition Frequency	f_T	$I_C=-10mA$ $V_{CE}=-5.0V$		80		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		45		pF

* $\leq 300\mu S$ $\leq 2.0\%$
Pulse test: pulse width $\leq 300\mu S$, duty cycle $\leq 2.0\%$.

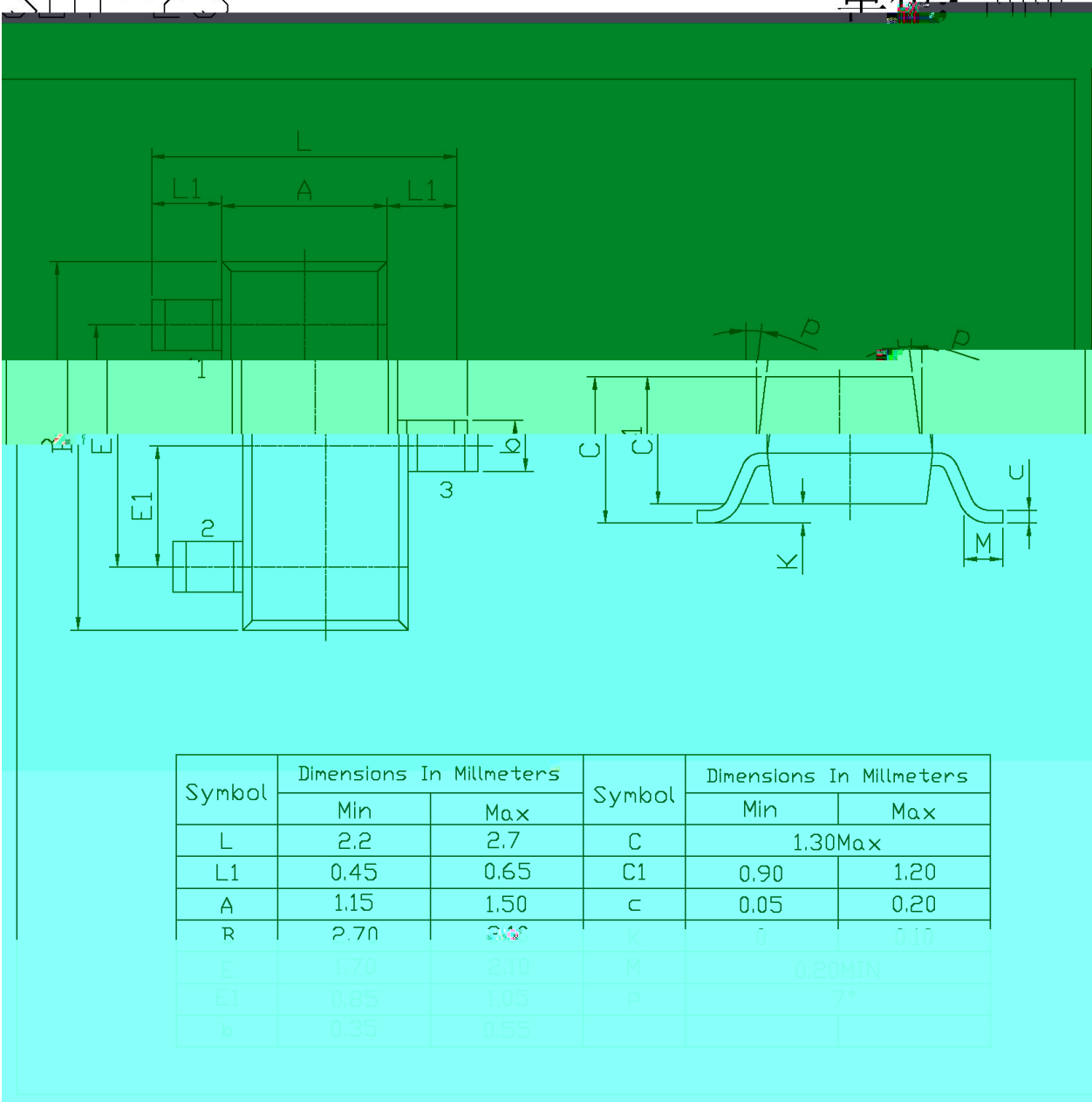
/ Electrical Characteristic Curve



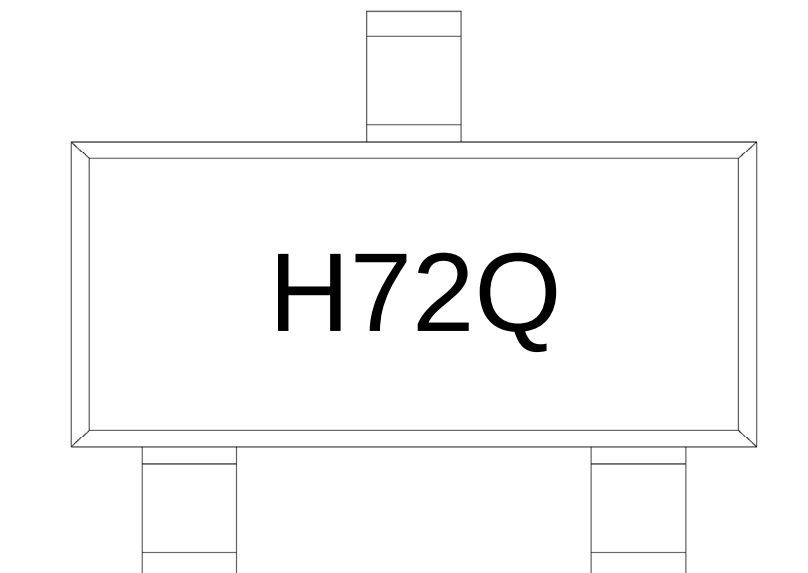
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



H

72

Q

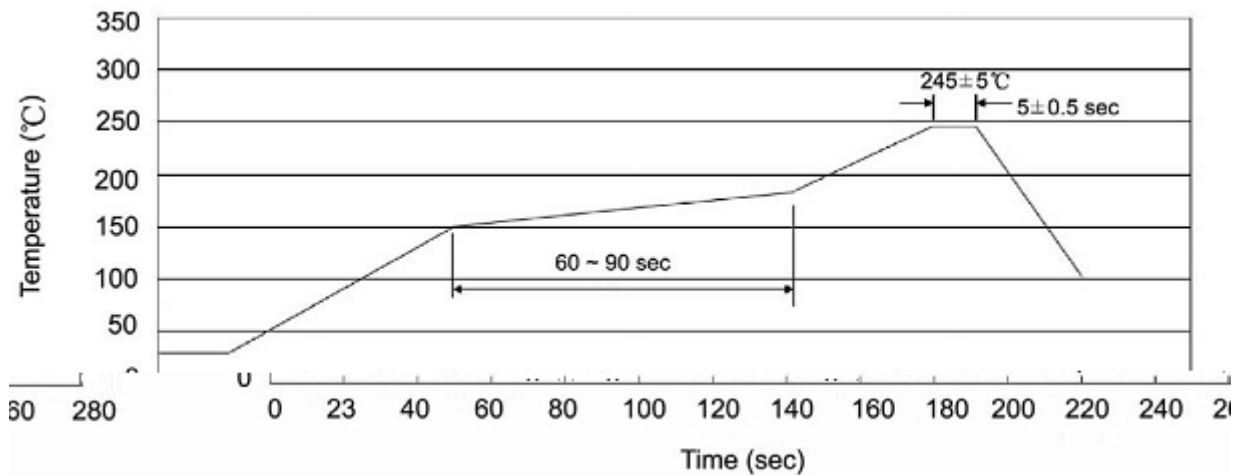
Note:

H: Company Code

72: Product Type Code

Q: h_{FE} Classifications Symbol 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. |

/ 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" x8	180×120×180	390×385×205

/ Notices