MMBT5089

RevF Apr.-2017

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

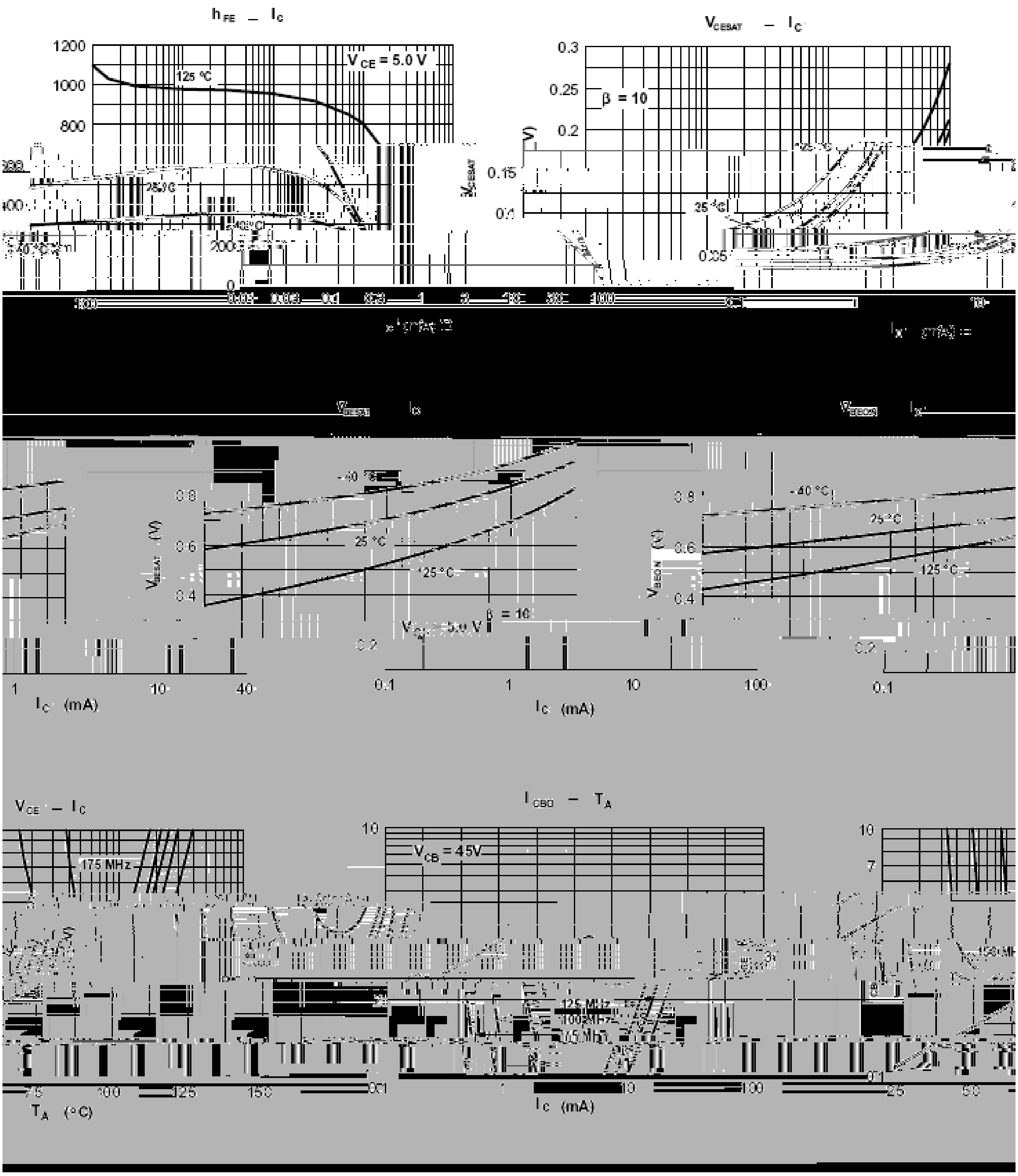
Low noise, high gain.

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	30	V
Collector to Emitter Voltage	V_{CEO}	25	V
Emitter to Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_j	-55 150	
Storage Temperature Range	T_{stg}	30	V

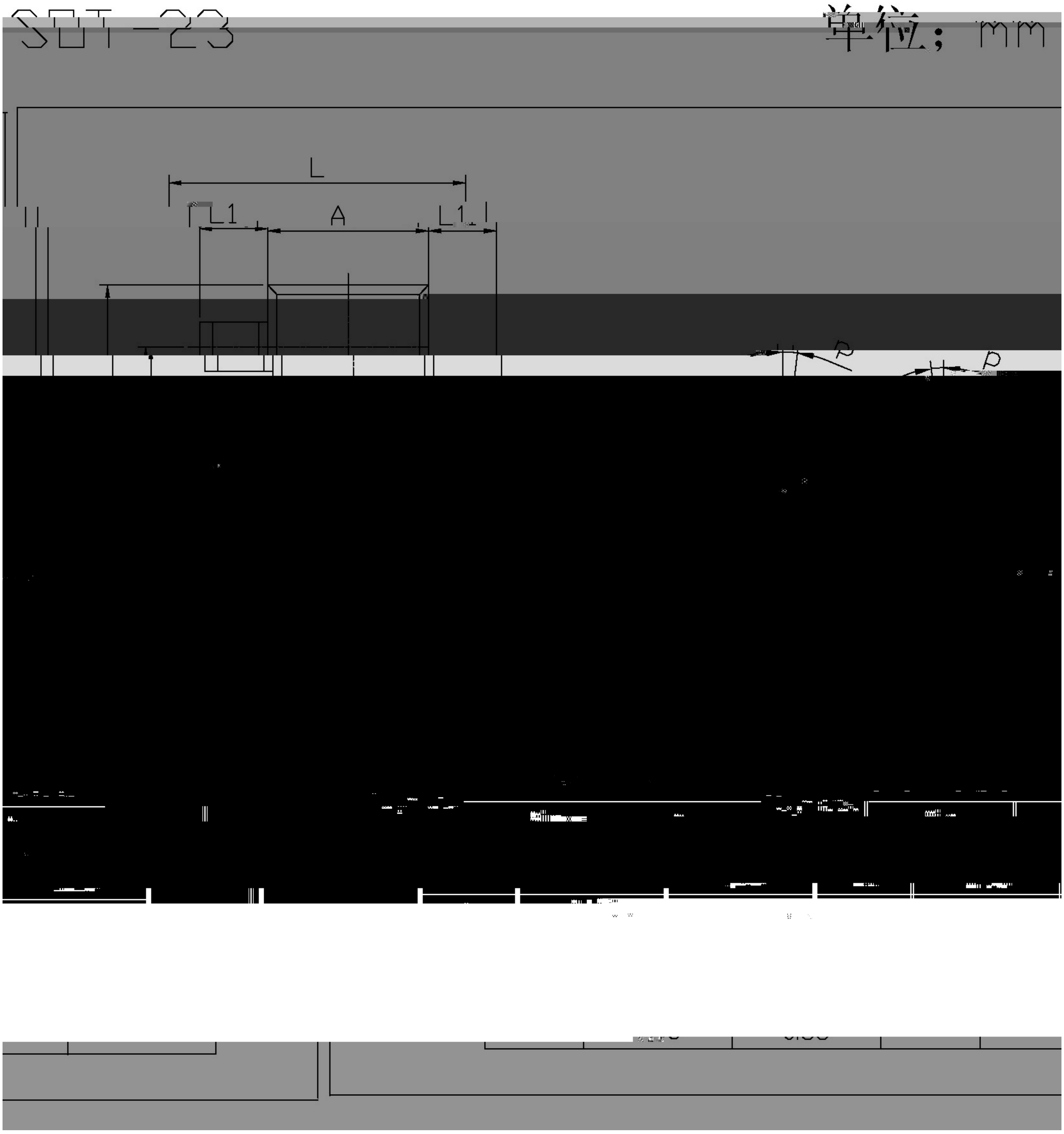
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=100μA	I_E=0	30			V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=1.0mA	I_B=0	25			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=15V	I_E=0			50	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=4.5V	I_C=0			100	nA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5.0V	I_C=100μA	400		1200	
	$h_{FE(2)}$	V_{CE}=5.0V	I_C=1.0mA	450			
	$h_{FE(3)}$	V_{CE}=5.0V	I_C=10mA	400			

Collector-Emitter Saturation Voltage V =4.5V 5920( )4712JET57.3 35921731484.08 01499.2(1 T)-7084.0V40.58 324 0.4802 T62f217.38 378

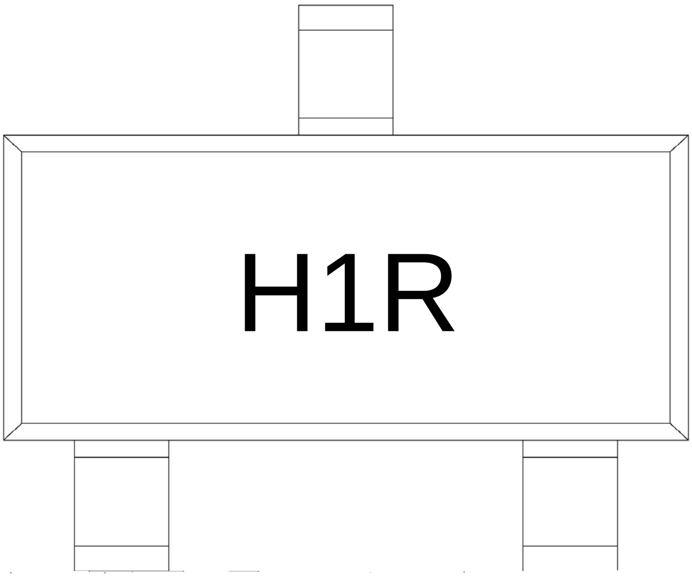
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



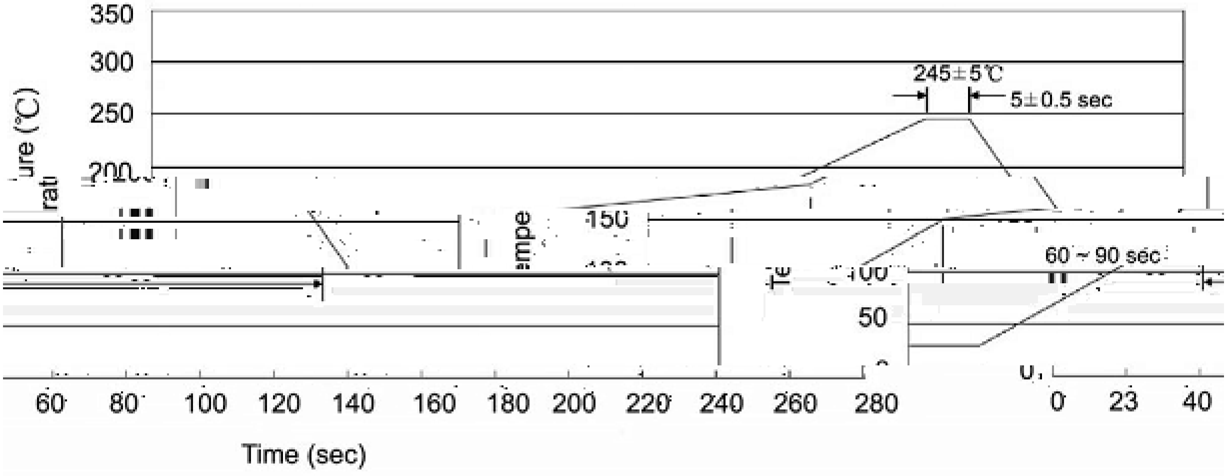
H

1R

Note:

H	Company Code
1R	Product Type

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1 25 150 60 90sec;
2 245±5 5±0.5sec;
3 2 10 /sec.

1.Preheating:25~150 , Time:60~90sec.
2.Peak Temp.:245±5 , Duration:5±0.5sec.
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	Units					Dimension	(unit mm^3)	
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205