

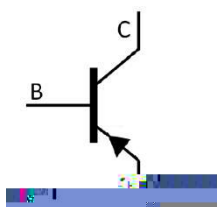
**2SB649TA**  
Rev.E Mar.-2016

JF K\$/O

GE G'

Silicon PNP transistor in a SOT-89 Plastic Package.

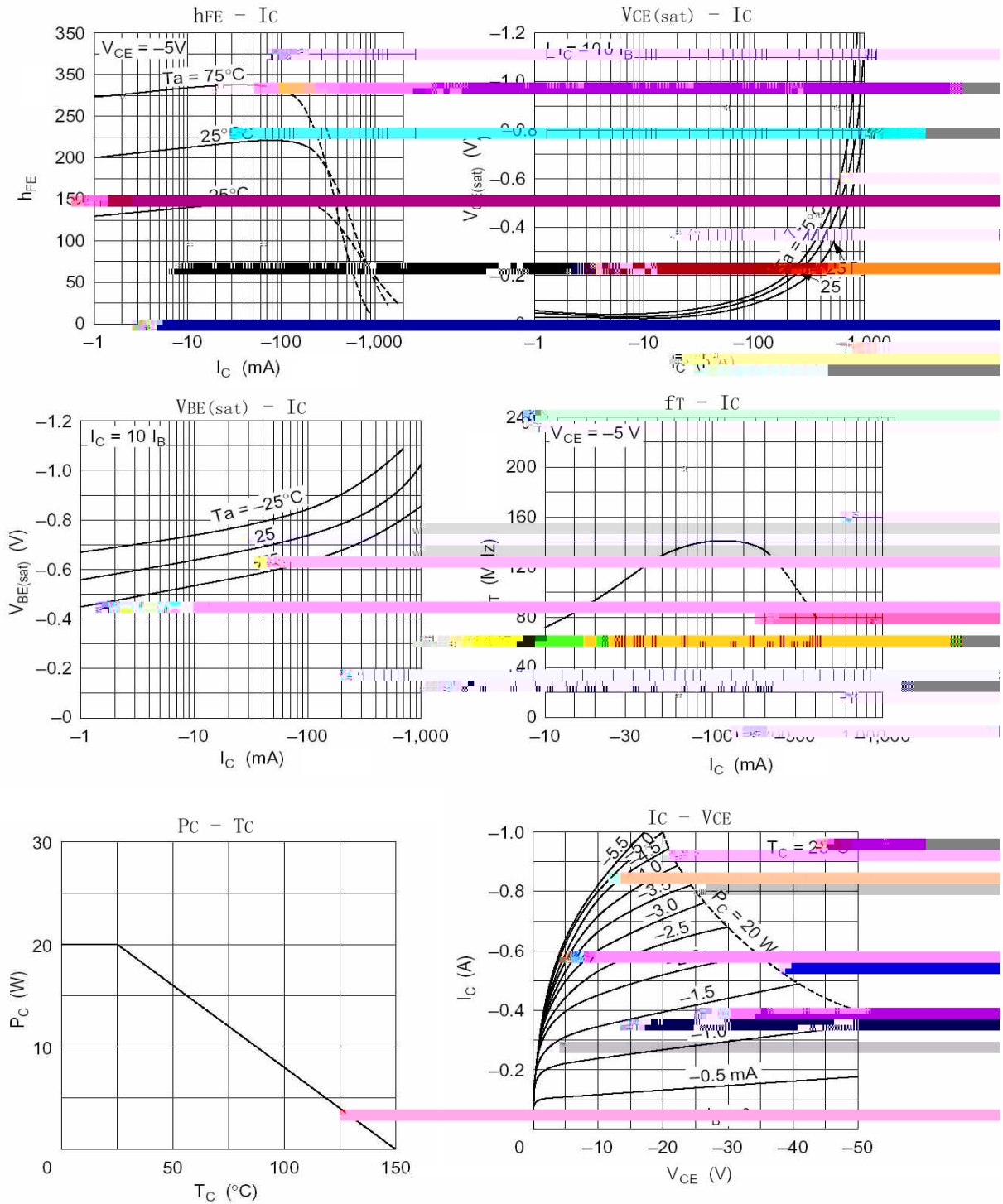
) J; --OK8



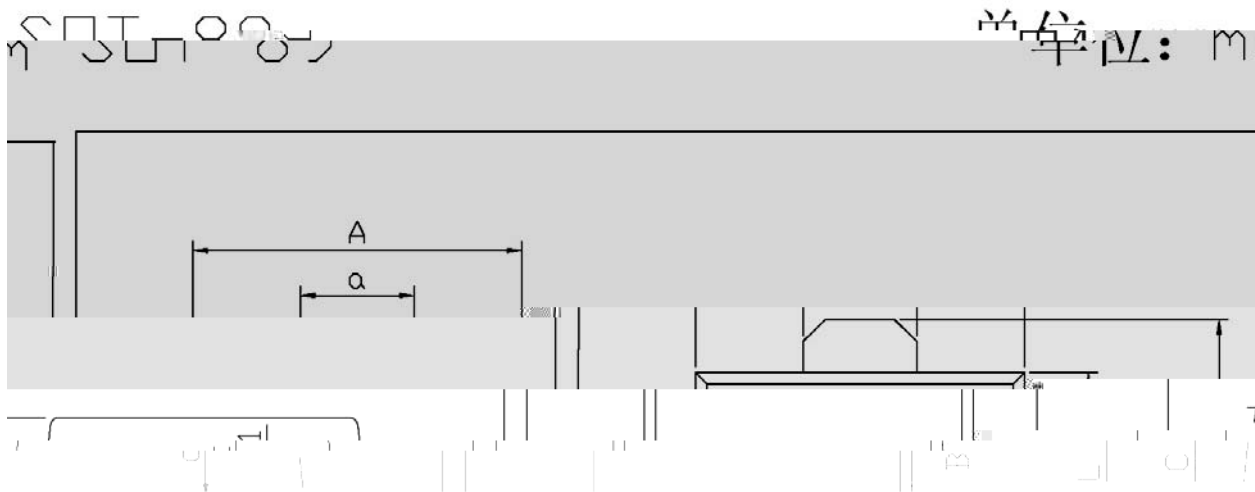
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-180	V
Collector to Emitter Voltage	$V_{CEO}$	-160	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current-Continuous	$I_C$	-1.5	A
Collector Current-Continuous(Pulse)	$I_{CP}$	-3.0	A
Collector Power Dissipation	$P_C$	500	mW
Collector Power Dissipation	$P_C(T_C=25^\circ\text{C})$	20	W
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	$V_{CBO}$	$I_C=-1.0\text{mA}$ $I_E=0$	-180			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-10\text{mA}$ $R_{BE}=\infty$	-160			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-1.0\text{mA}$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-160\text{V}$ $I_E=0$			-10	A
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-5.0\text{V}$ $I_C=-150\text{mA}$	60		320	
	$h_{FE(2)}$	$V_{CE}=-5.0\text{V}$ $I_C=-500\text{mA}$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}$ $I_B=-50\text{mA}$			-1.0	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=-5.0\text{V}$ $I_C=-150\text{mA}$			-1.5	V
Transition Frequency	$f_T$	$V_{CE}=-5.0\text{V}$ $I_C=-150\text{mA}$		140		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$		27		pF

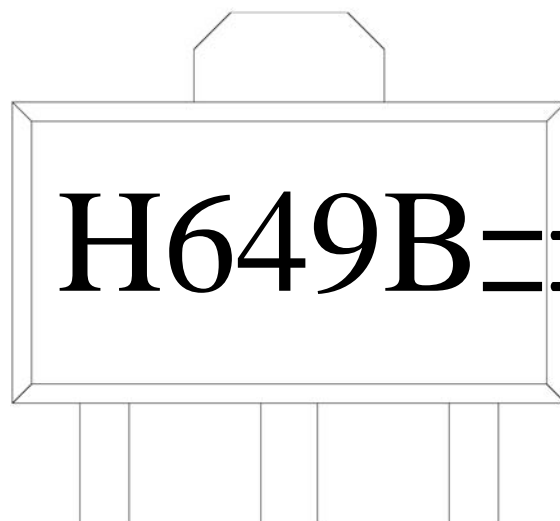
**/ Electrical Characteristic Curve**



/ Package Dimensions



/ Marking Instructions



H

649

B  $h_{FE}$

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Note:

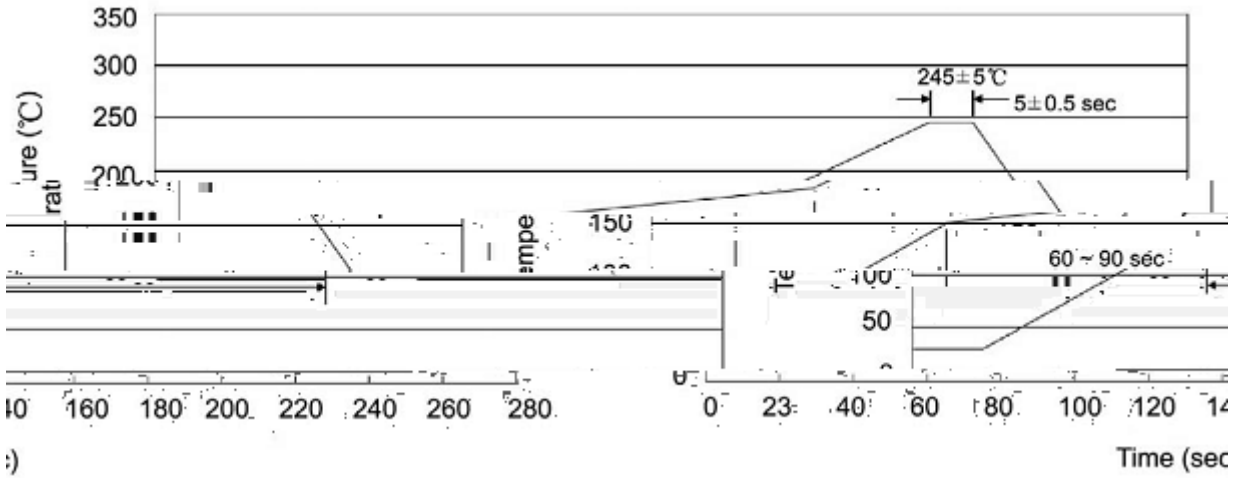
H: Company Code.

649: Product Type.

B  $h_{FE}$  Classifications Symbol

\*\* : Lot No. Code, code change with Lot No.

( ) / Resistance to Soldering Heat Test Conditions



Note:

- 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 <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-89	1,000	7	7,000	6	42,000	7 ×12	180×120×180	390×385×205

/ Notices