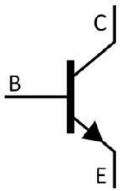


**MMBT3904T**  
Rev.E Mar.-2016

SOT-89

NPN

Silicon NPN transistor in



# MMBT3904T

Rev.E Mar.-2016

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	40	V
Emitter to Base Voltage	$V_{EBO}$	6.0	V
Collector Current - Continuous	$I_C$	200	mA
Collector Power Dissipation	$P_C$	200	mW
Collector Power Dissipation*	* $P_C$	350	mW
Junction Temperature	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

\* 7×5×0.6mm

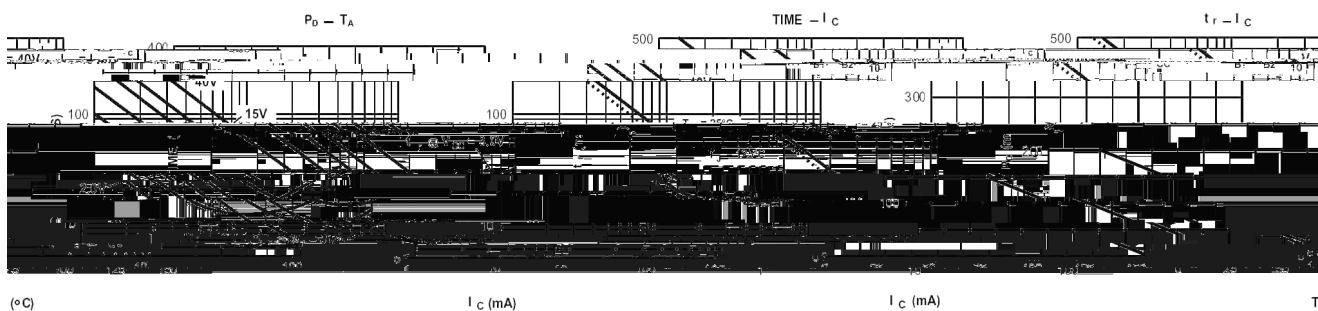
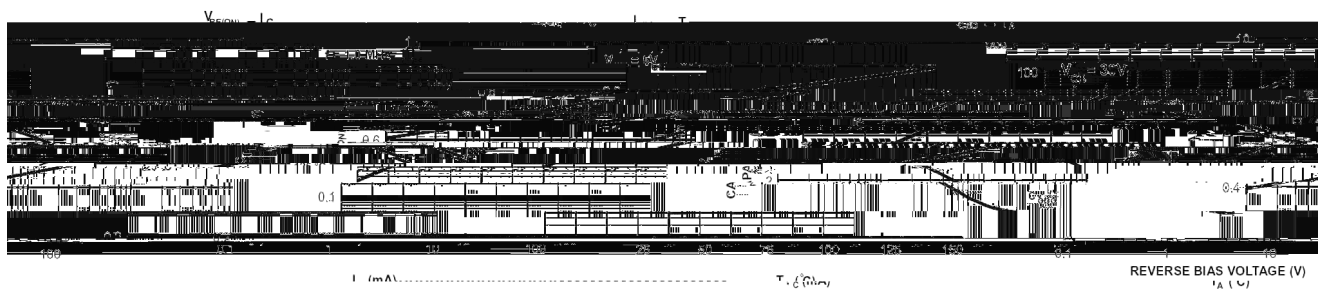
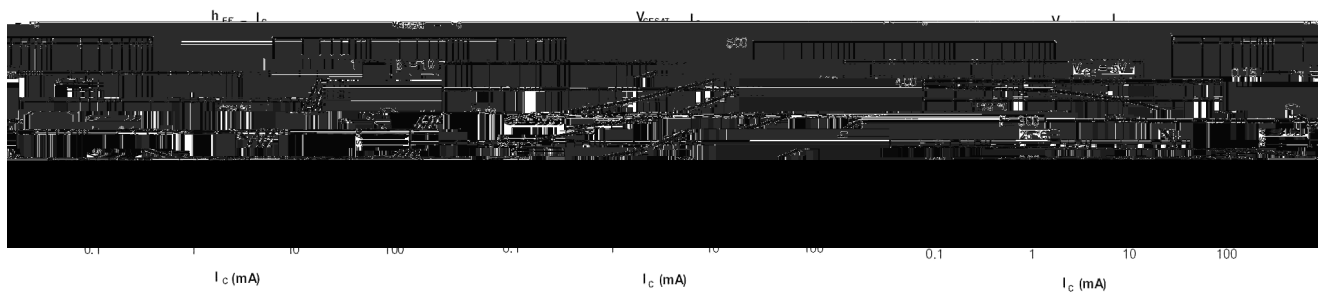
\*When mounted on a 7×5×0.6mm ceramic board

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage						


**/ Electrical Characteristics(Ta=25 )**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Emitter to Base Saturation Voltage	$V_{BE(sat)}$ (2)	$I_C=50mA$ $I_B=5.0mA$			0.95	V
Transition Frequency	$f_T$	$I_C=10mA$ $V_{CE}=20V$ $f=100MHz$	300			MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=5.0V$ $f=1.0MHz$			4.0	pF
Storage Time	$t_{stg}$	$V_{CC}=3.0V$ $I_C=10mA$ $I_{B1}=-I_{B2}=1.0mA$			200	ns
Fall Time	$t_f$	$V_{CC}=3.0V$ $I_C=10mA$ $I_{B1}=-I_{B2}=1.0mA$			50	ns
Delay Time	$t_d$	$V_{CC}=3.0V$ $V_{BE}=0.5V$ $I_C=10mA$ $I_{B1}=1.0mA$			35	ns
Rise Time	$t_r$	$V_{CC}=3.0V$ $V_{BE}=0.5V$ $I_C=10mA$ $I_{B1}=1.0mA$			35	ns
Input Capacitance	$C_{ib}$	$V_{EB}=0.5V$ $f=1.0MHz$			8.0	pF

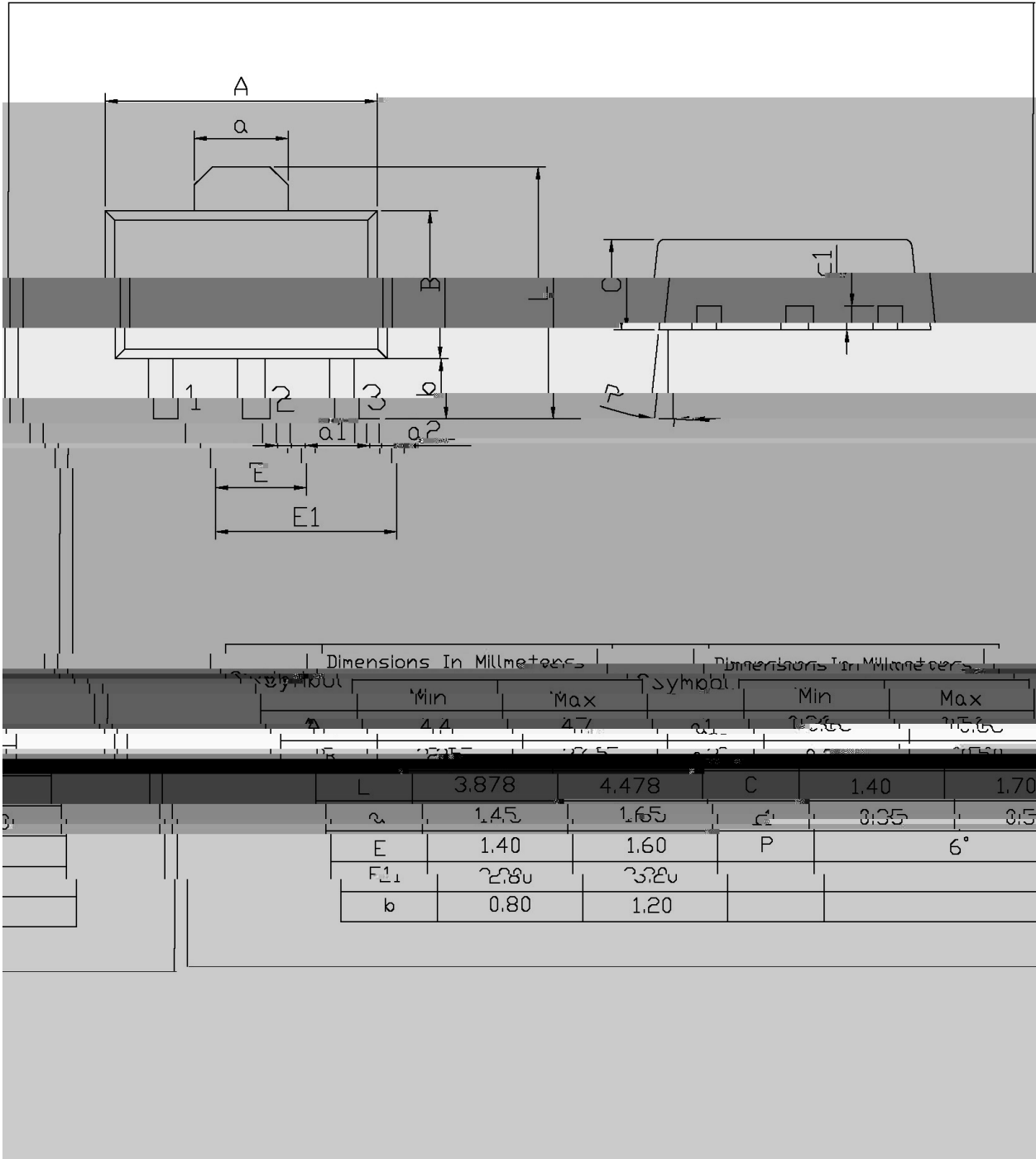
/ Electrical Characteristic Curve



/ Package Dimensions

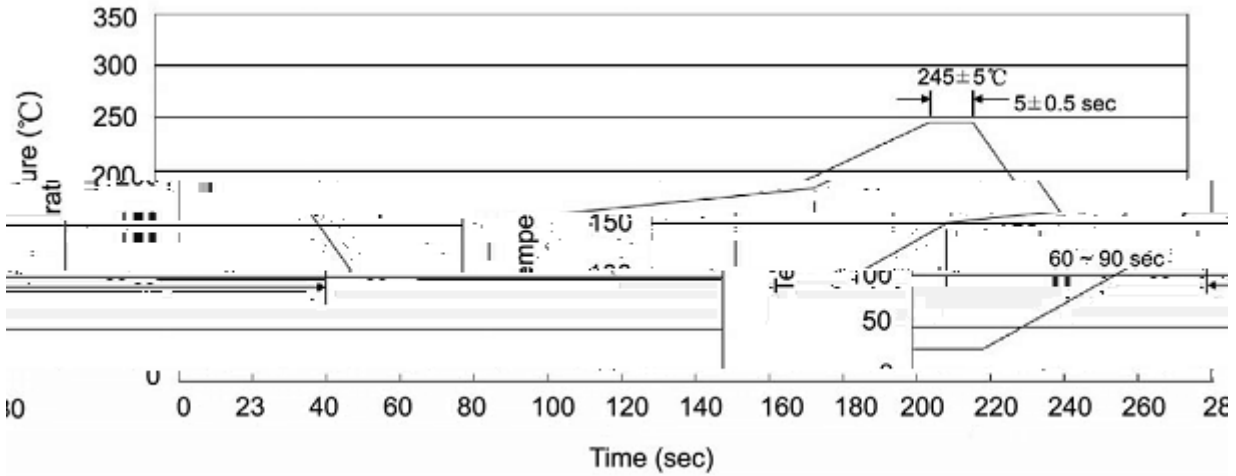
SOT-89

单位: mm





( ) / K\d g\iXk i\`Gif]`d`]fi`@`I`]\fn`Jfd` \i`e`^ZGY\$`i`\\z



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

Package Type	Units	Dimension	(unit mm)
260±5	10±1 sec.	Temp.:260±5	Time:10±1 sec

	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	8	56,000	7 ×12	180×120×180	385×257×392

/ Notices