

/ Descriptions

TO-92LM PNP Silicon PNP transistor in a TO-92LM Plastic Package.

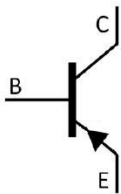
/ Features

High V_{CBO} , low $V_{CE(sat)}$, high speed switching.

/ Applications

DC-DC converter, low power switching regulator, high voltage application.

/ Equivalent Circuit



/ Pinning



PIN1: Base PIN 2: Collector PIN 3: Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	O	Y
h_{FE} Range	60~120	100~200

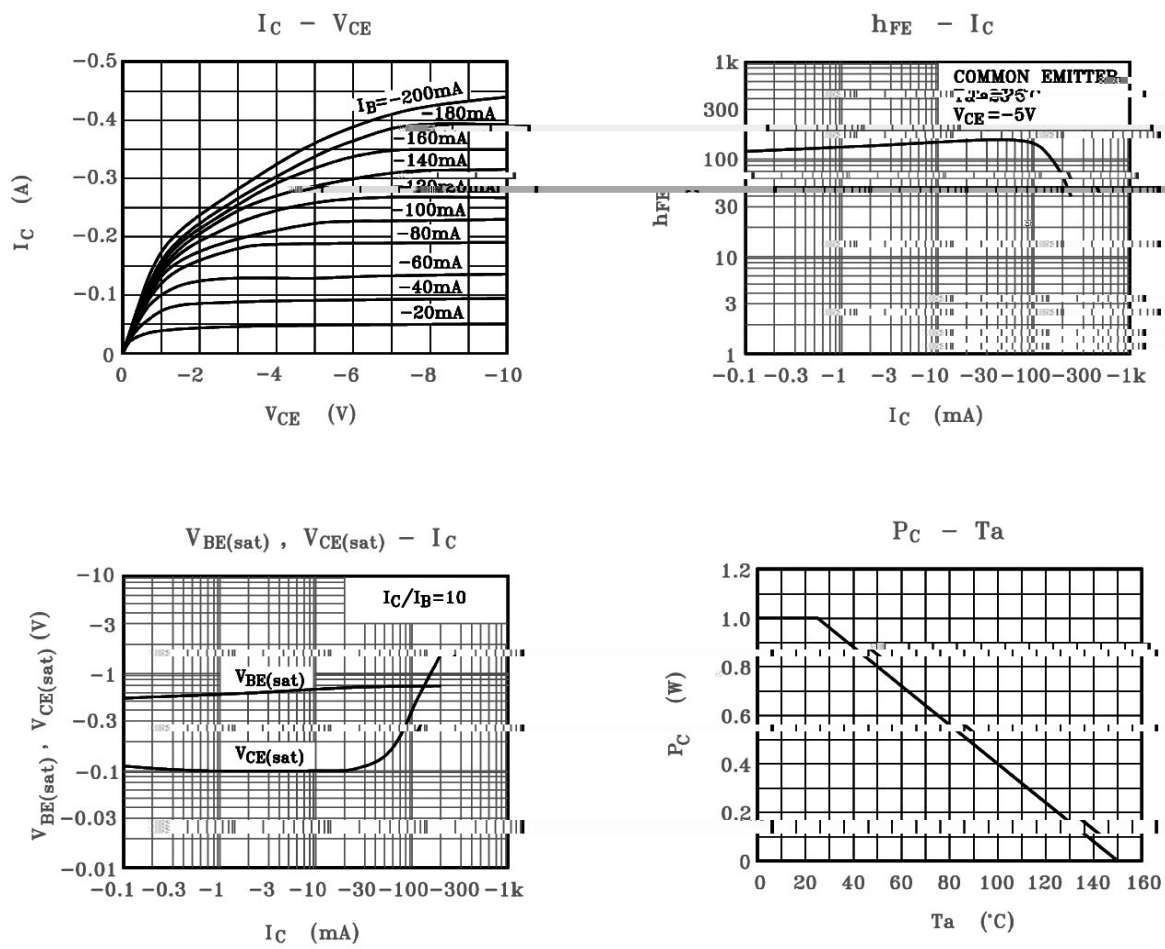
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-400	V
Collector to Emitter Voltage	V_{CEO}	-400	V
Emitter to Base Voltage	V_{EBO}	-7.0	V
Collector Current - Continuous	I_C	-500	mA
Collector Power Dissipation	P_C	1.0	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~150	°C

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=-1.0mA$ $I_B=0$	-400			V
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=-100 A$ $I_E=0$	-400			V
Emitter to Base Breakdown Voltage	V_{EBO}	$I_E=-100 A$ $I_C=0$	-7.0			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-400V$ $I_E=0$			-10	A
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0V$ $I_C=0$			-10	A
DC Current Gain	h_{FE}	$V_{CE}=-5.0V$ $I_C=-100mA$	60		200	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100mA$ $I_B=-10mA$			-1.0	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100mA$ $I_B=-10mA$			-1.2	V
Turn-On Time	t_{on}	$I_C=-100mA$ $R_L=1.5K$ $I_{B1}=-10mA$ $I_{B2}=20mA$ $V_{CC}=-150V$			1.0	s
Storage Time	t_{stg}				4.0	
Turn-Off Time	t_{ff}				1.0	

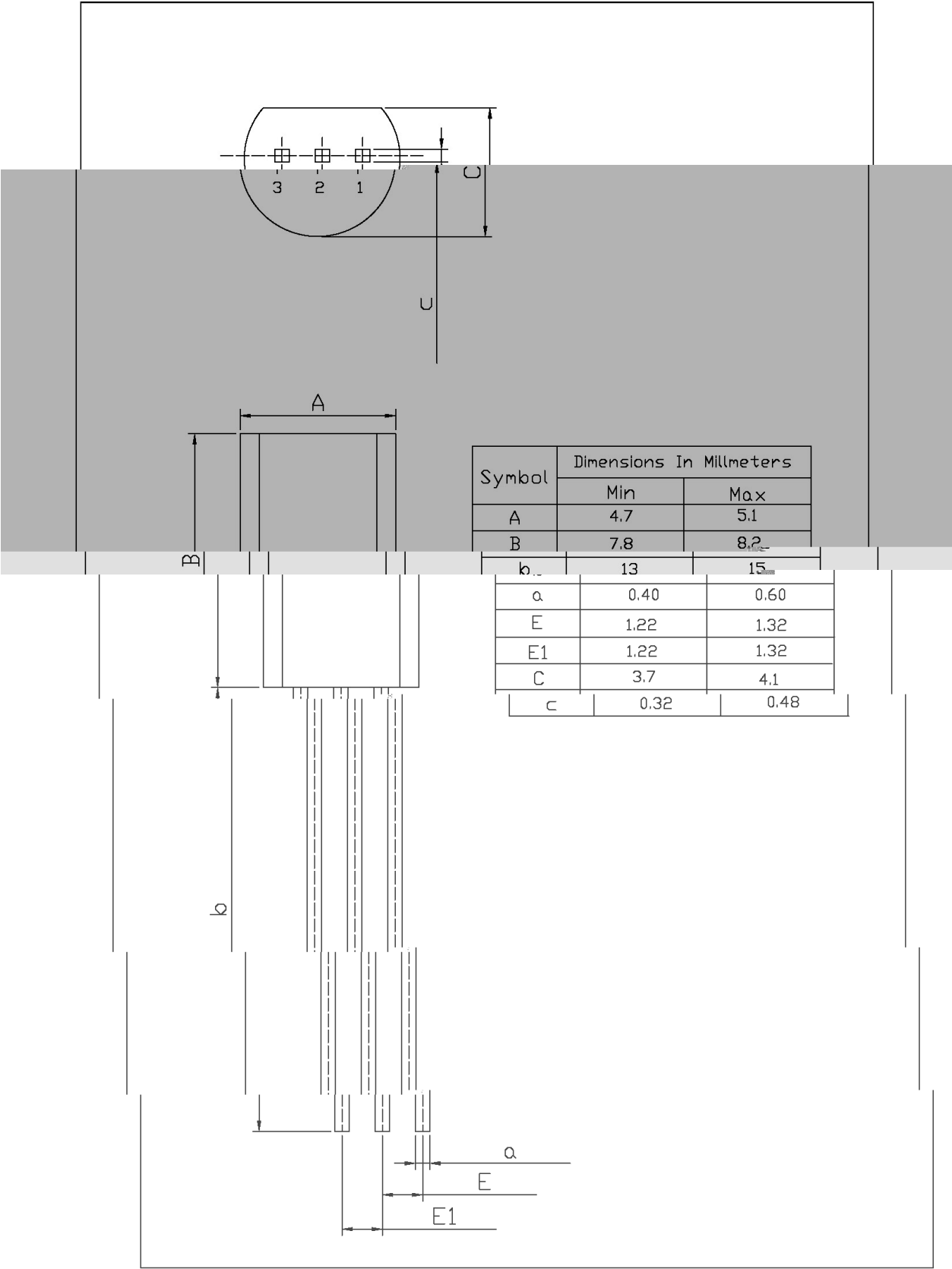
/ Electrical Characteristic Curve



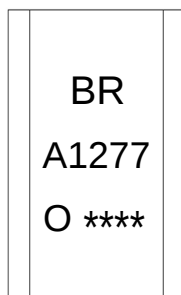
/ Package Dimensions

T0-92LM

Unit: mm



/ Marking Instructions



BR:

A1277

O: h_{FE}

Note:

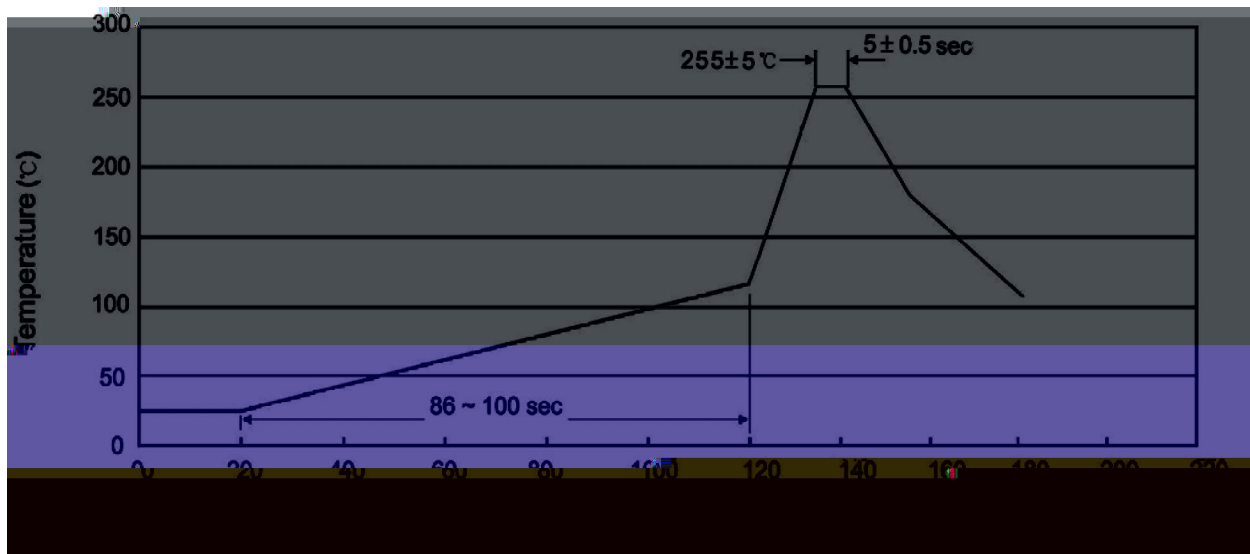
BR: Company Code.

A1277: Product Type.

O: h_{FE} Classifications Symbol

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

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|--------|---|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |
| 3 | | 2 | 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

270±5 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type	Units					Dimension (unit mm3)		
	Units/Bag	Bags/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Bag	Inner Box	Outer Box
TO-92LM	1,000	8	8,000	5	40,000	135×190	237×172×102	560×245×195

/ AMMO

Package Type	Units					Dimension (unit mm3)	
	Units/tape	Tape/Inner Box	Rows/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Inner Box	Outer Box
TO-92LM	2,500	1	100	10	25,000	328×230×42	480×346×235 547×407×268

/ Notices