

/ Descriptions

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

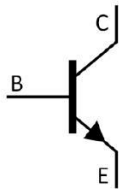
/ Features

2SA1315
Low $V_{CE(sat)}$ voltage: $V_{CE(sat)}=0.5V(MAX.)$ ($I_C=1A$), High speed switching time: $t_{stg}=1.0\mu s(Typ.)$
complementary pair with 2SA1315.

/ Applications

Power Amplifier switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	O	Y
h_{FE} Range	70 140	120 240

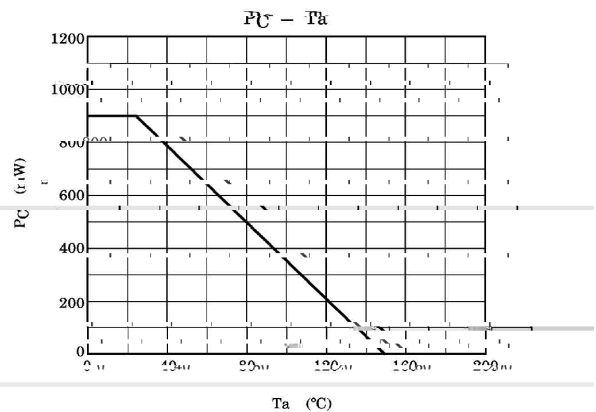
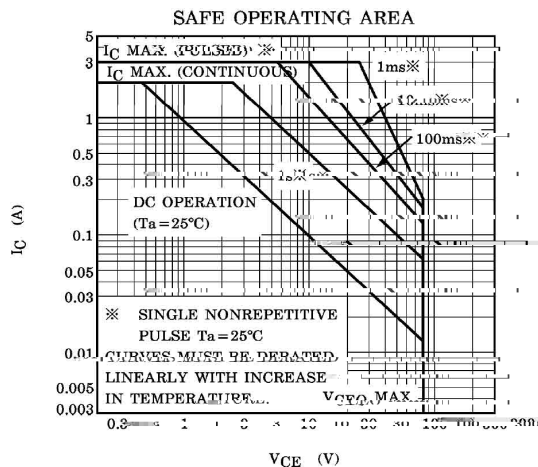
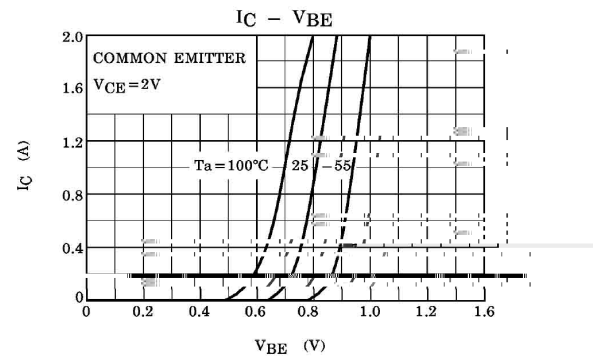
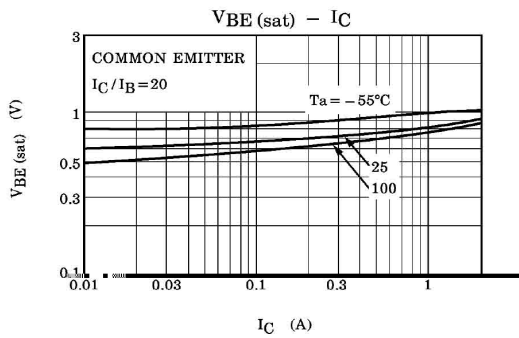
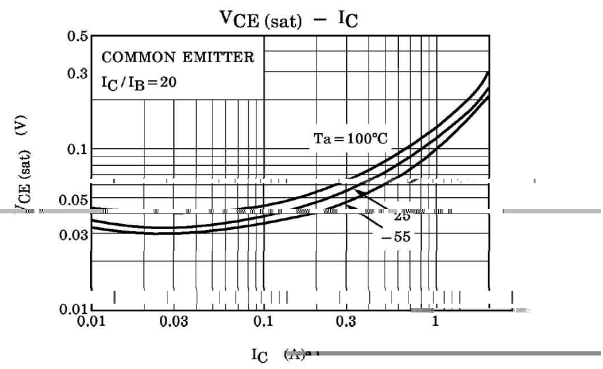
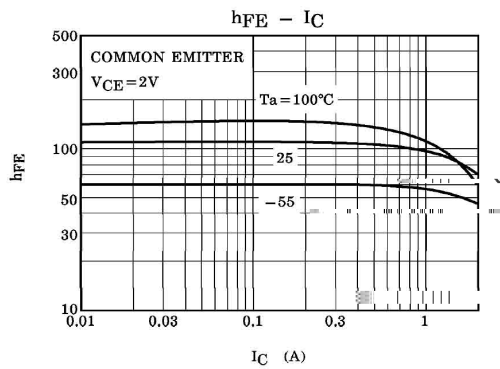
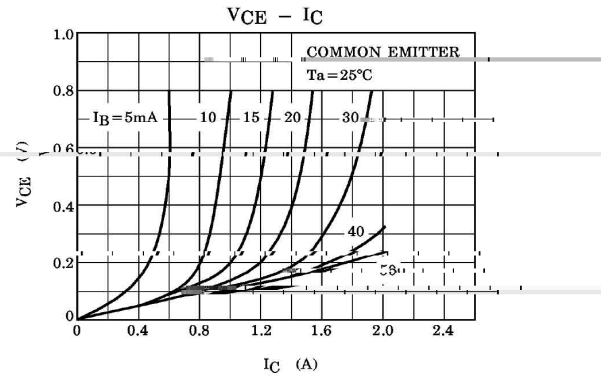
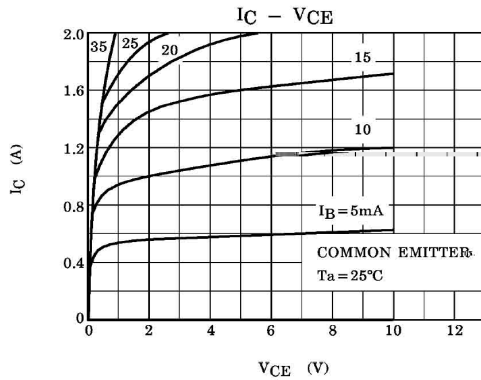
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	80	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	I_C	2.0	A
Base Current	I_B	1.0	A
Collector Power Dissipation	P_C	900	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-Emitter Breakdown Voltage	$V_{BR(CEO)}$	$I_C=10mA$ $I_E=0$	80			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=80V$ $I_E=0$			1.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			1.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=2.0V$ $I_C=0.5A$	70		240	
	$h_{FE(2)}$	$V_{CE}=2.0V$ $I_C=1.5A$	40			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.0A$ $I_B=0.05A$		0.15	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1.0A$ $I_B=0.05A$		0.9	1.2	V
Transition Frequency	f_T	$V_{CE}=2.0V$ $I_C=0.5A$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V$ $I_E=0$ $f=1.0MHz$		30		pF
Turn-On Time	t_{on}	$I_{B1}=-I_{B2}=0.05A$, DUTY CYCLE $\leq 1\%$		0.2		μs
Storage Time	t_{stg}			1.0		
Fall Time	t_f			0.2		

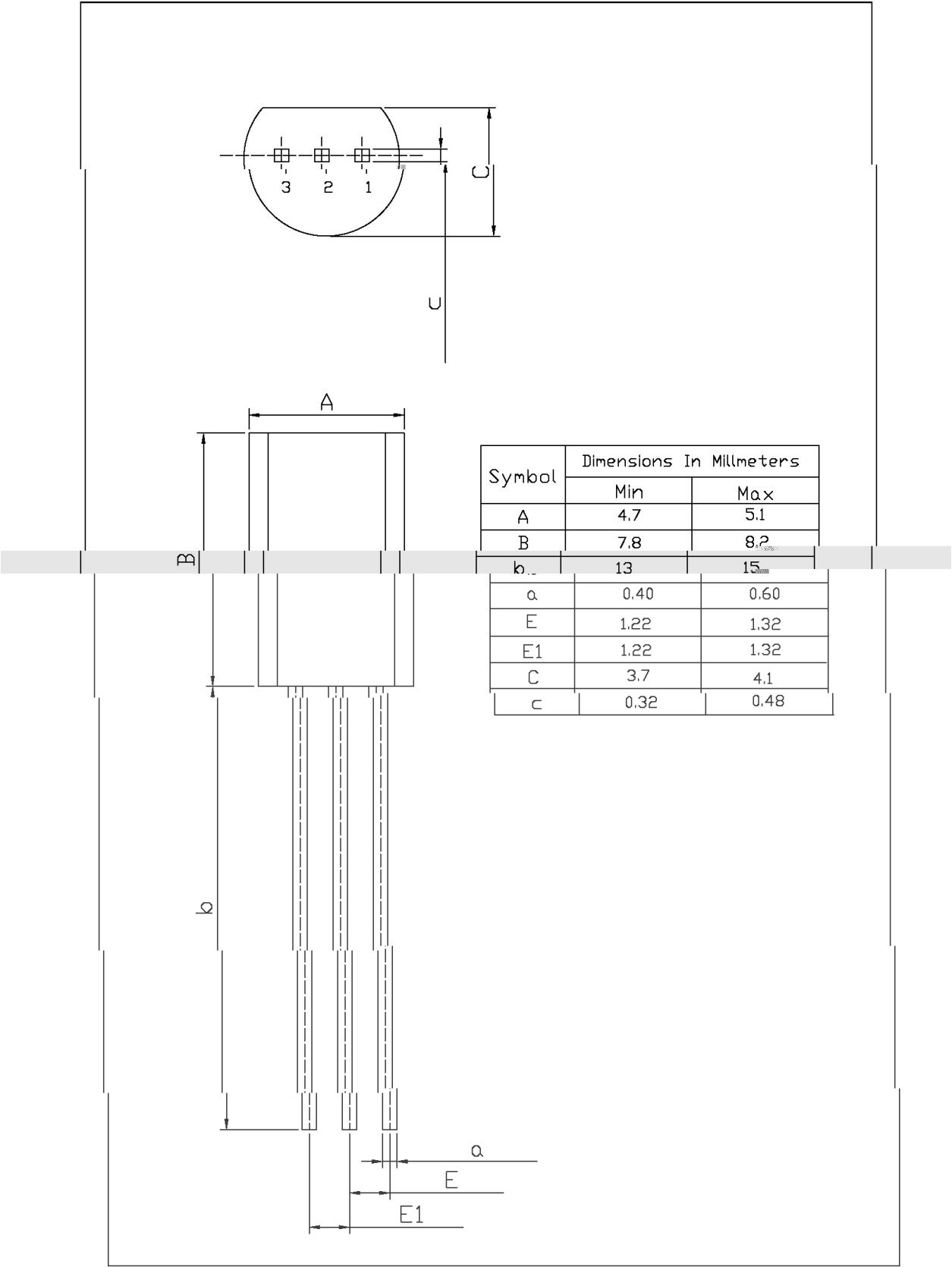
/ **Electrical Characteristic Curve**



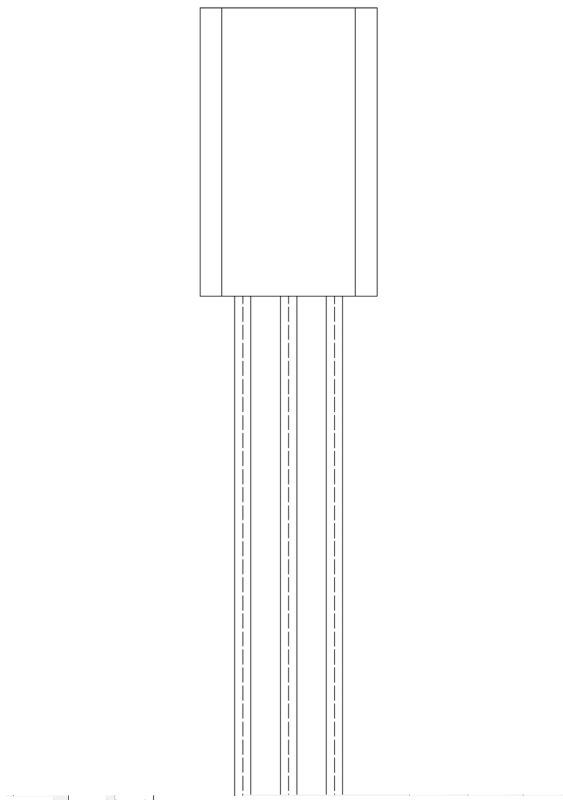
/ Package Dimensions

T0-92LM

Unit: mm



/ Marking Instructions



BR:

C3328

O: h_{FE}

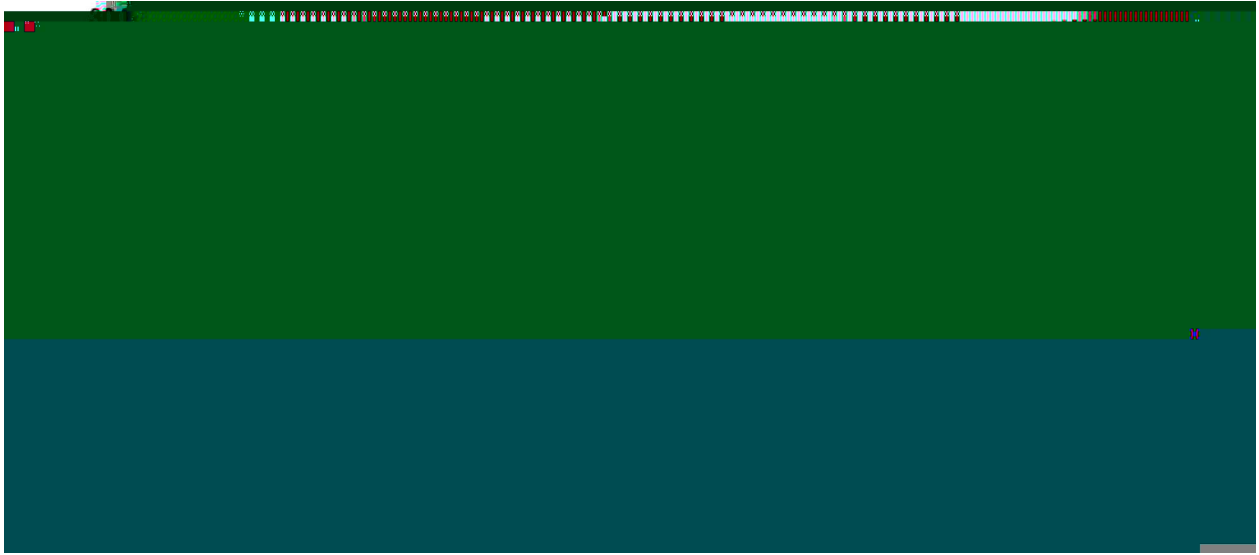
Note:

BR: Company Code.

C3328: Product Type.

O: h_{FE} Classifications Symbol

() / 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-92LM	1,000	8	8,000	5	40,000	135×190	237×172×102	560×245×195

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92LM	2,500	1	100	10	25,000	328×230×42	小箱 480×346×235 大箱 547×407×268

/ Notices