

**/ Descriptions**

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

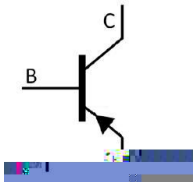
**/ Features**

2SC2235  
Complementary pair with 2SC2235.

**/ Applications**

Power amplifier applications, driver stage amplifier 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	80~160	120~240

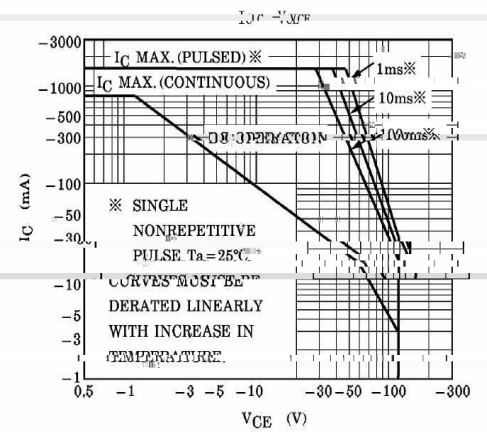
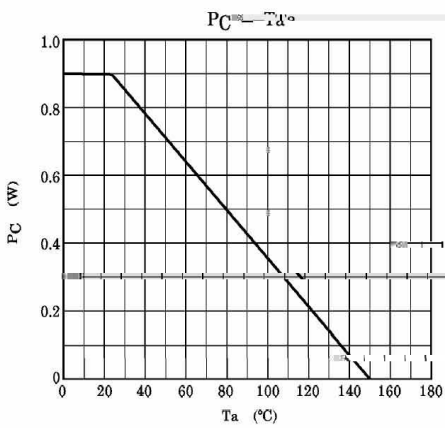
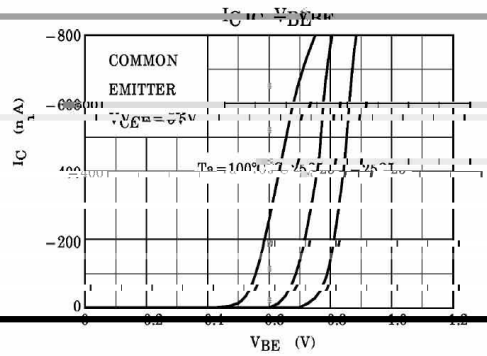
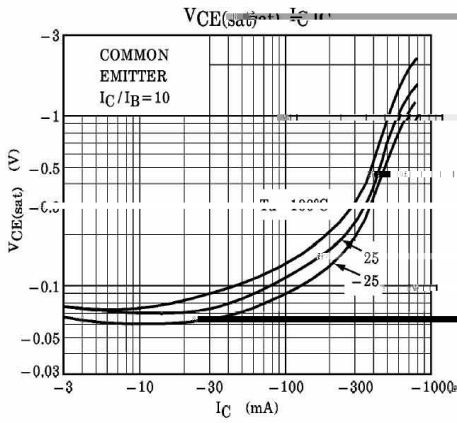
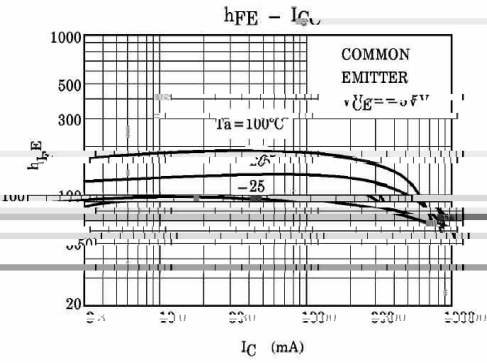
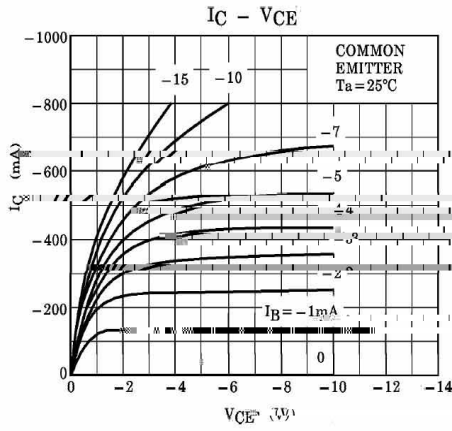
**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-120	V
Collector to Emitter Voltage	$V_{CEO}$	-120	V
Emitter to Base Voltage	$V_{EBO}$	-5.0	V
Collector Current - Continuous	$I_C$	-800	mA
Emitter Current - Continuous	$I_E$	800	mA
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 to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-10mA$ $I_B=0$	-120			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-1.0mA$ $I_C=0$	-5.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-120V$ $I_E=0$			-0.1	A
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-0.1	A
DC Current Gain	$h_{FE}$	$V_{CE}=-5.0V$ $I_C=-100mA$	80		240	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-500mA$ $I_B=-50mA$			-1.0	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=-5.0V$ $I_C=-500mA$			-1.0	V
Transition Frequency	$f_T$	$V_{CE}=-5.0V$ $I_C=-100mA$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$			40	pF

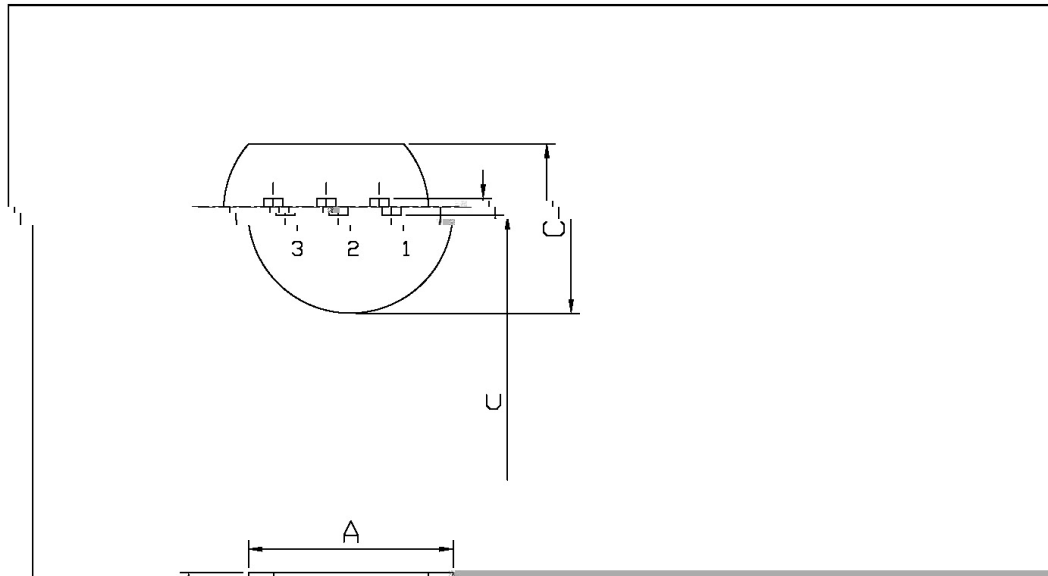
/ Electrical Characteristic Curve



/ Package Dimensions

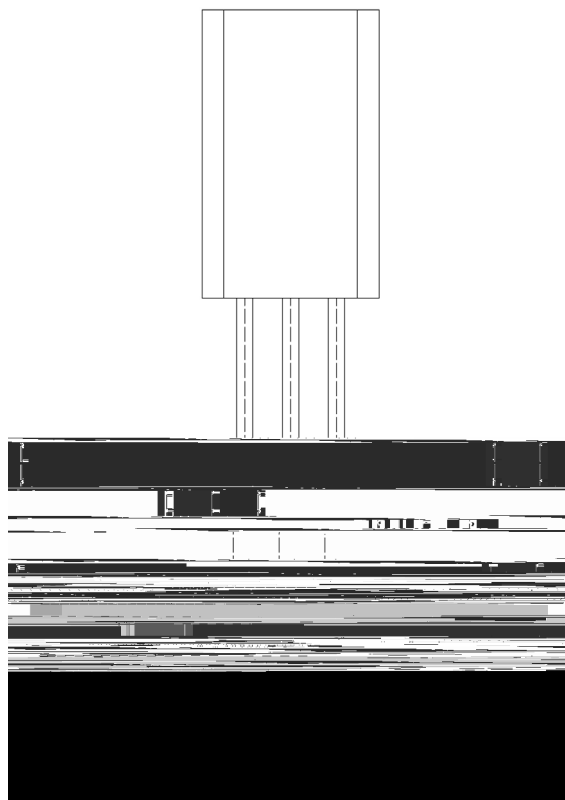
TO-92LM

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.47	5.1
U	1.27	1.78
U1	0.51	0.76

/ Marking Instructions



BR:

A965

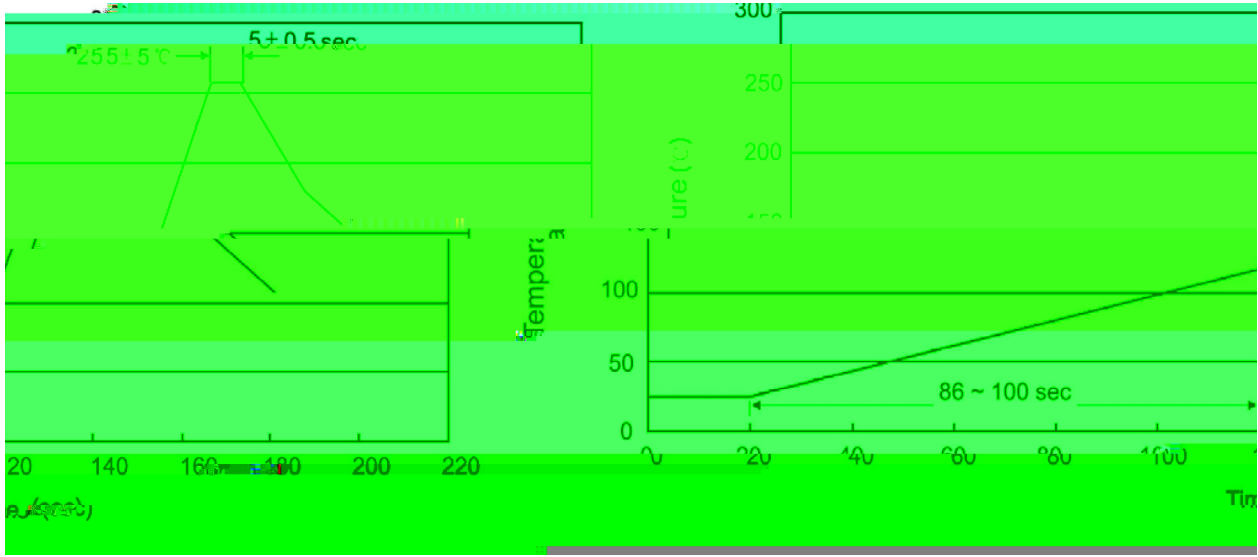
O:

$h_{FE}$

\*\*\*\*

Note:

( ) / 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 mm <sup>3</sup> )
--------------	-------	-----------	-------------------------