

**KTA1277**  
Rev.F Mar.-2016

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

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

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

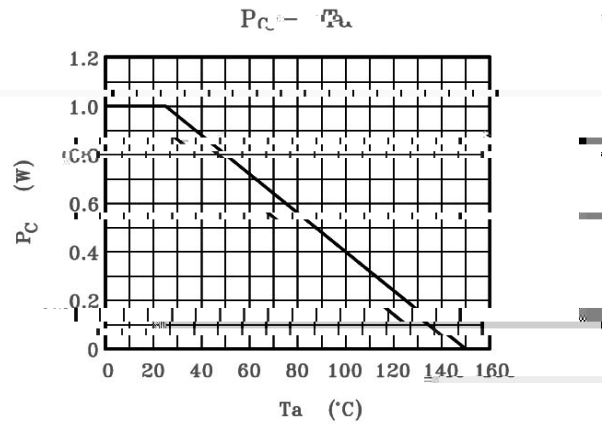
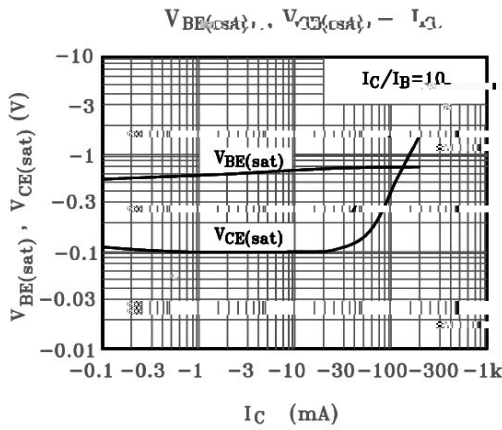
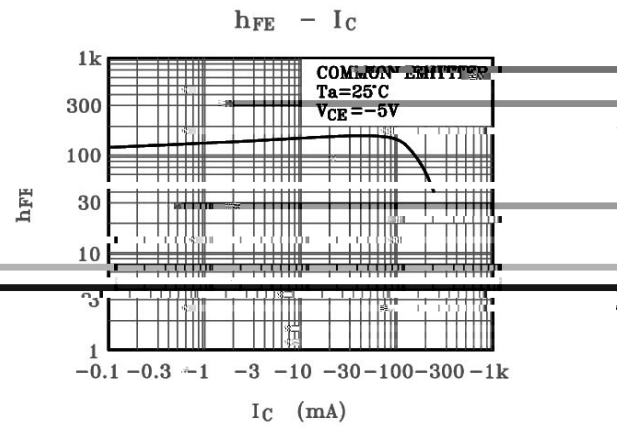
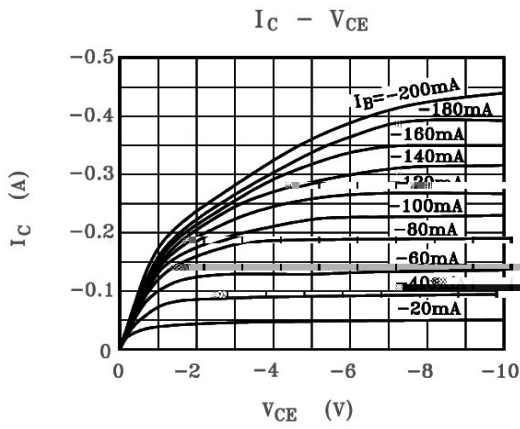
**/ Absolute Maximum Ratings(Ta=25 )**

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	
Storage Temperature Range	$T_{stg}$	-55 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-1.0mA$ $I_B=0$	-400			V
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=-100\mu A$ $I_E=0$	-400			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=-100\mu A$ $I_C=0$	-7.0			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-400V$ $I_E=0$			-10	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-10	$\mu A$
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	$\mu s$
Storage Time	$t_{stg}$				4.0	
Turn-Off Time	$t_{ff}$				1.0	

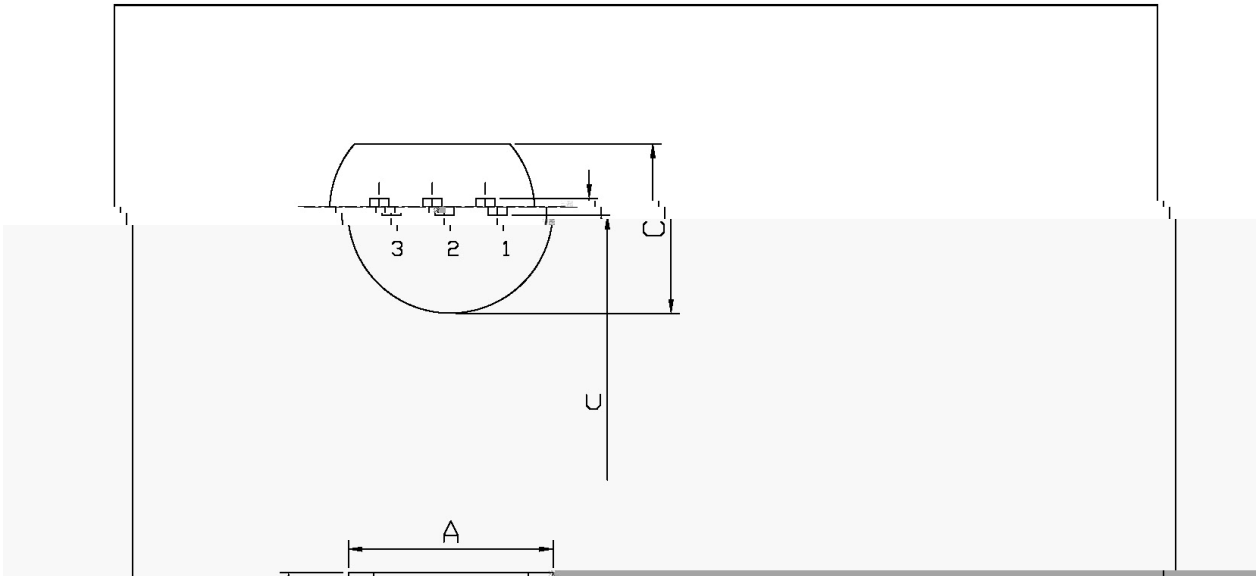
/ Electrical Characteristic Curve



**/ Package Dimensions**

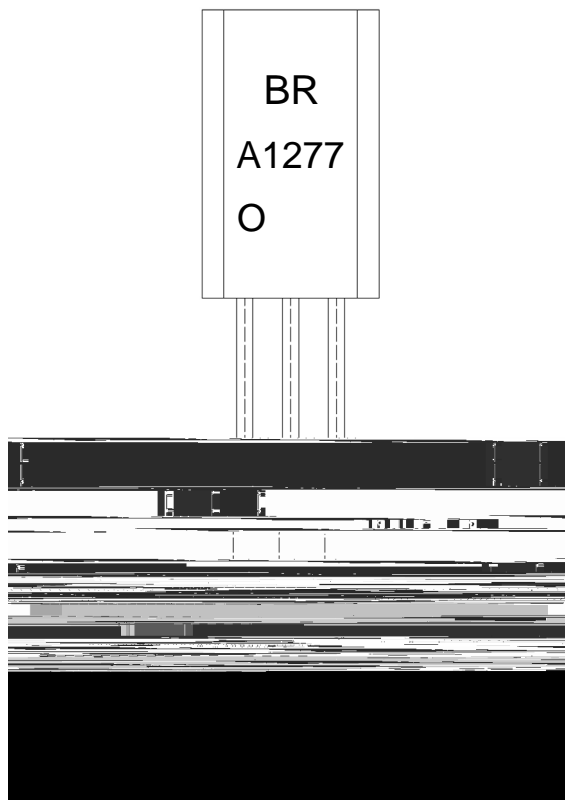
TO-92LM

Unit: mm



Symbol	Dimensions In Millimeters	
	Min	Max
A	4.00	5.00
B	1.00	1.25
C	0.20	0.30
D	0.10	0.15
E	0.10	0.15
F	0.10	0.15
G	0.10	0.15
H	0.10	0.15
I	0.10	0.15
J	0.10	0.15
K	0.10	0.15
L	0.10	0.15
M	0.10	0.15
N	0.10	0.15
O	0.10	0.15
P	0.10	0.15
Q	0.10	0.15
R	0.10	0.15
S	0.10	0.15
T	0.10	0.15
U	0.10	0.15
V	0.10	0.15
W	0.10	0.15
X	0.10	0.15
Y	0.10	0.15
Z	0.10	0.15

/ Marking Instructions



BR:

A1277

O:  $h_{FE}$

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Note:

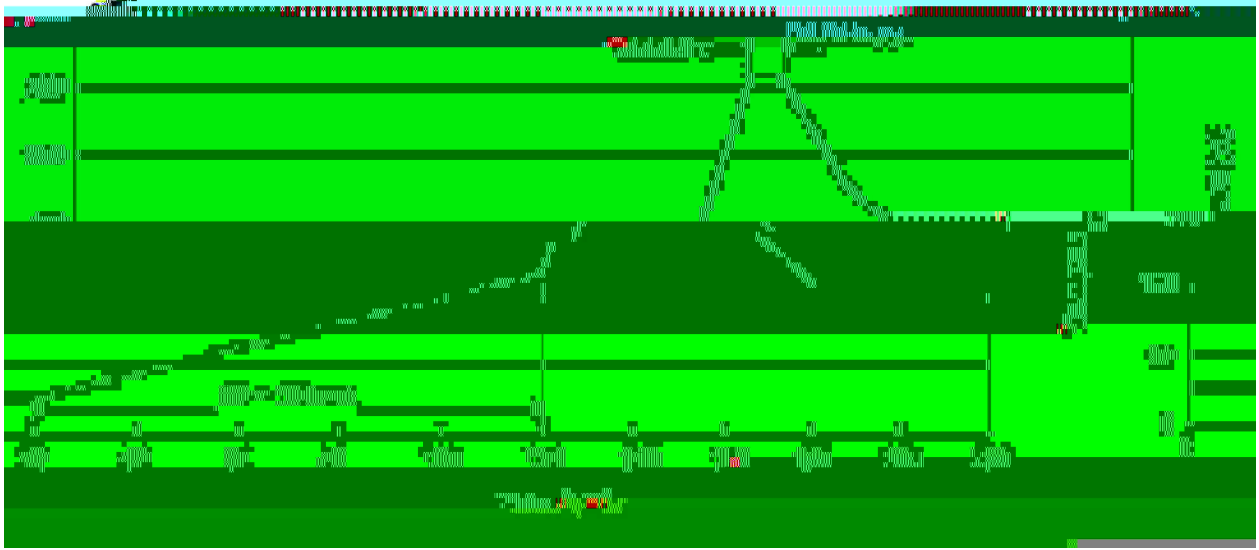
BR: Company Code.

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 mm <sup>3</sup> )

/ AMMO

Package Type	Units				Dimension		(unit mm <sup>3</sup> )

/ Notices