



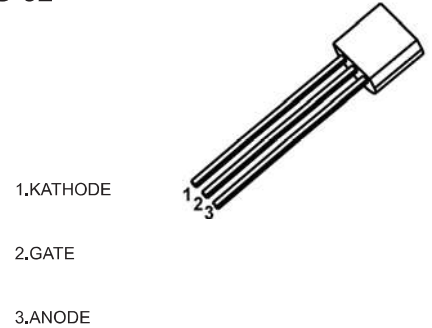
**DONGGUAN NANJING ELECTRONICS LTD.,**  
**TO-92 Plastic-Encapsulate Thyristors**

**MCR100- 6,- 8 Silicon Controlled Rectifier**

**MAIN FEATURES**

Symbol		value	unit
$I_{T(RMS)}$		0.8	A
$V_{DRM} / V_{RRM}$	MCR100-6	400	V
	MCR100-8	600	
$T_j$	Junction Temperature	-40 ~ 125	°C
$T_{stg}$	Storage Temperature	-55 ~ 150	°C

**TO-92**



**DESCRIPTION**

Logic level sensitive gate triac intended to be interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.

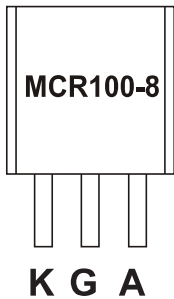
**FEATURES**

- Blocking voltage to 400 V (MCR100-6)
- RMS on-state current to 0.8 A
- General purpose switching

**APPLICATIONS**

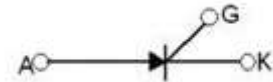
- General purpose switching
- Phase control applications
- Solid state relays

**MARKING**



MCR100-8=Device code

**Equivalent Circuit**



**ORDERING INFORMATION**

Part Number	Package	Packing Method	Pack Quantity
MCR100-8	TO-92	Bulk	1000pcs/Bag
MCR100-8-TA	TO-92	Tape	2000pcs/Box

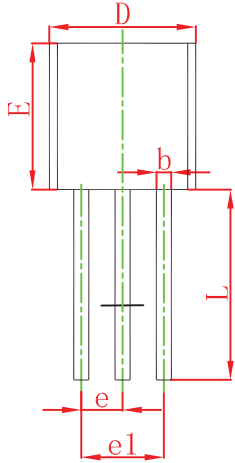
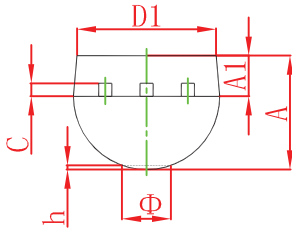
## ELECTRICAL CHARACTERISTICS

$T_a=25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Max	Unit	
On state voltage *	$V_{TM}$	$I_{TM}=1\text{A}$		1.7	V	
Gate trigger voltage	$V_{GT}$	$V_{AK}=7\text{V}$		0.8	V	
Peak Repetitive forward and reverse blocking voltage MCR100-6 MCR100-8	$V_{DRM}/V_{RRM}$	$I_{DRM}/I_{RRM}=10\ \mu\text{A}$	400 600		V	
Peak forward or reverse blocking Current	$I_{DRM}$ $I_{RRM}$	$V_{AK}=\text{Rated}$ $V_{DRM}$ or $V_{RRM}$		10	$\mu\text{A}$	
Holding current	$I_H$	$I_{HL}=20\text{mA}, V_{AK}=7\text{V}$		5	mA	
Gate trigger current	$I_{GT}$	$V_{AK}=7\text{V}$	A2	5	15	$\mu\text{A}$
			A1	15	30	$\mu\text{A}$
			A	30	80	$\mu\text{A}$
			B	80	200	$\mu\text{A}$

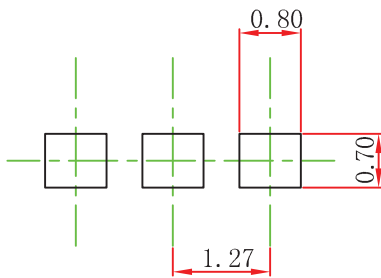
\* Forward current applied for 1 ms maximum duration, duty cycle $\leq$ 1%.

## TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

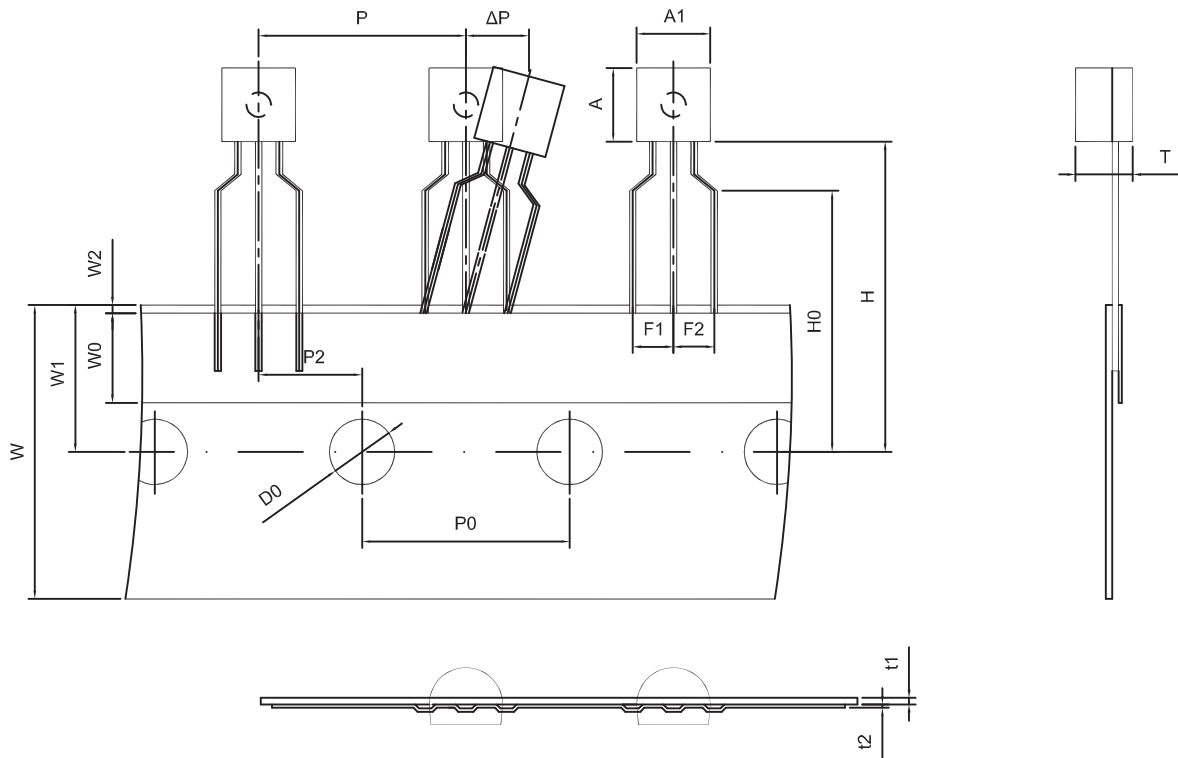
## TO-92 Suggested Pad Layout



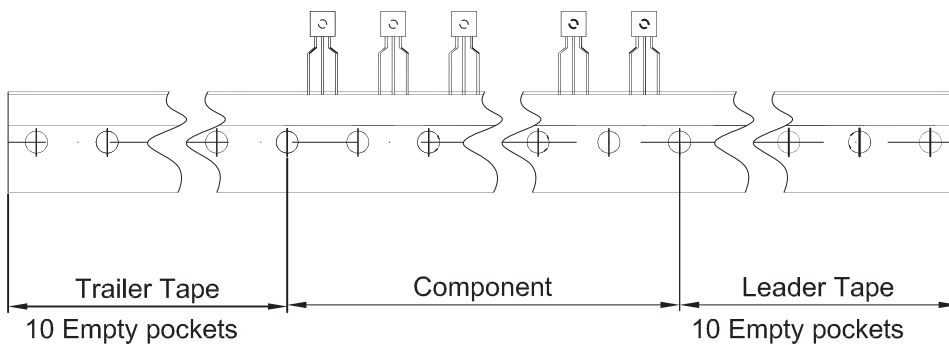
### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

## TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250