

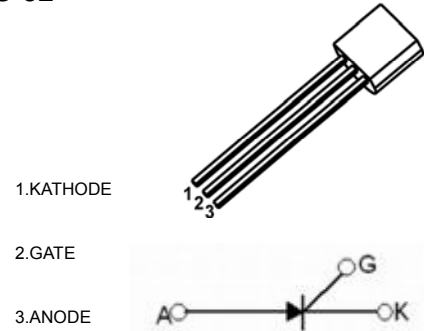
# TO-92 Plastic-Encapsulate Thyristors

## MCR100- 6,- 8 Silicon Controlled Rectifier

### MAIN FEATURES

Symbol	value	unit
$I_{T(RMS)}$	0.8	A
$V_{DRM} / V_{RRM}$	MCR100-6	400
	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

### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

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

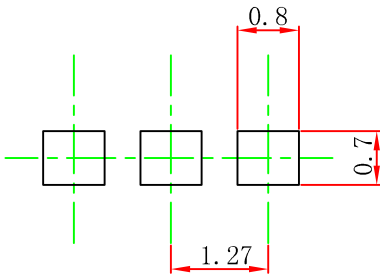
\* Forward current applied for 1 ms maximum duration, duty cycle  $\leq 1\%$ .

## 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	4.400	4.700	0.173	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

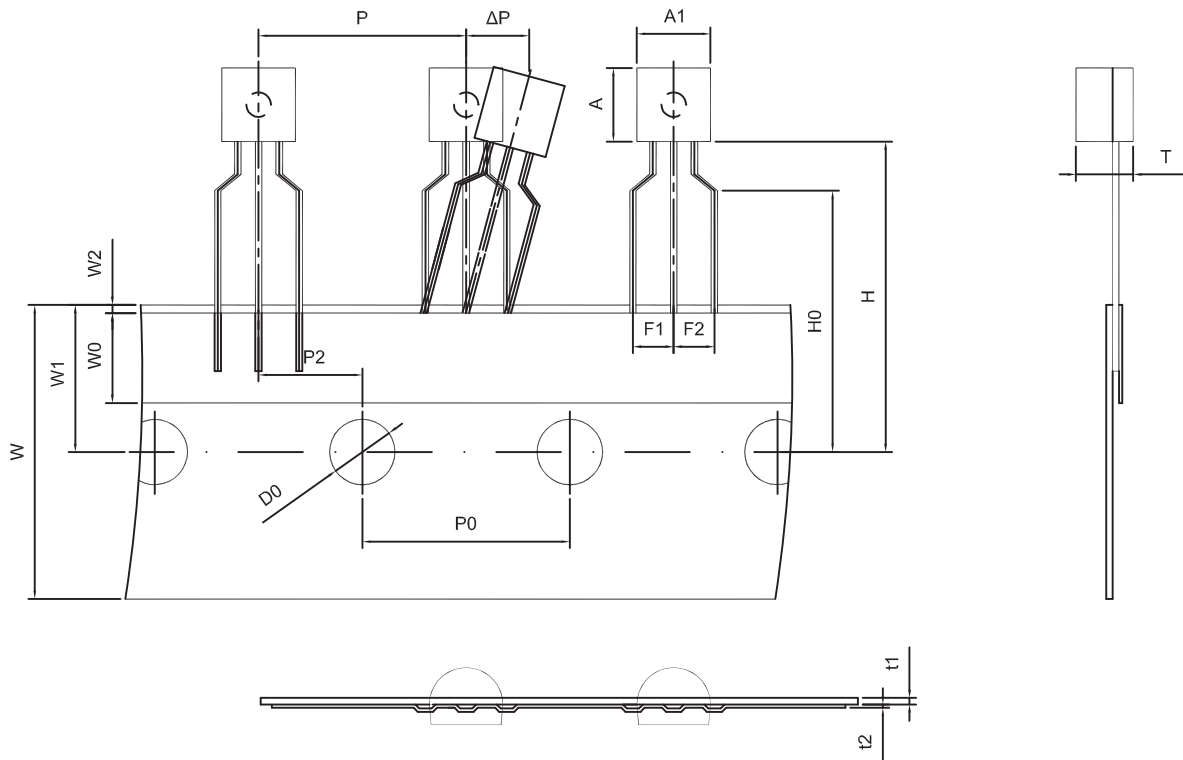
## TO-92 Suggested Pad Layout



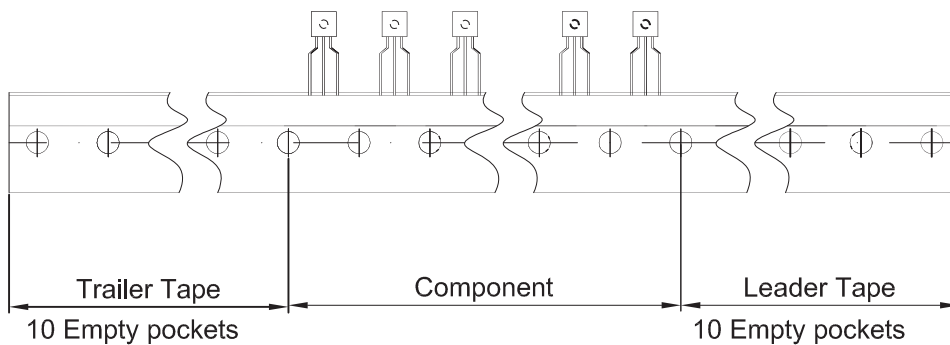
### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ 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±0.2	4.5±0.2	3.5±0.2	12.7±0.3	12.7±0.2	6.35±0.3	2.5±0.3	2.5±0.3	18.0+1.0/-0.5
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0±0.5	9.0±0.5	1.0 MAX.	19.0±1.0	16.0±0.5	4.0±0.5	0.4±0.05	0.2±0.05	0 ± 1.0



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