

TO-92 Plastic-Encapsulate Thyristors

MCR100- 6,- 8 Silicon Controlled Rectifier

MAIN FEATURES

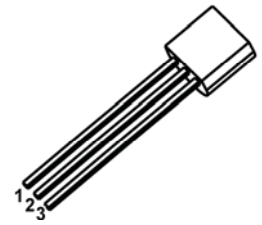
Symbol	value	unit
$I_{T(RMS)}$	0.8	A
V_{DRM} / V_{RRM}	MCR100-6	400
	MCR100-8	600
T_j	Junction Temperature	-40 ~ 125 °C
T_{stg}	Storage Temperature	-55 ~ 150 °C

TO-92

1.KATHODE

2.GATE

3.ANODE



DESCRIPTION

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

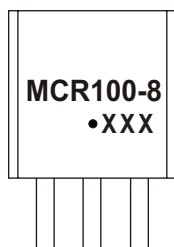
FEATURES

- 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

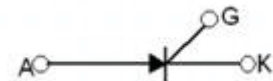
MARKING



K G A

MCR100-8=Device code
Solid dot=Green molding compound device,
if none,the normal device
XXX=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

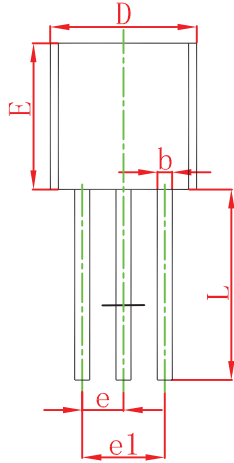
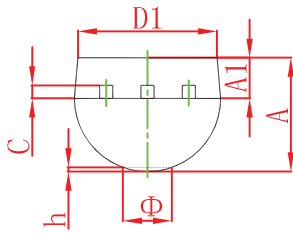
ELECTRICAL CHARACTERISTICS

$T_a=25^{\circ}\text{C}$ 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}	$I_{DRM}/I_{RRM}=10\text{ }\mu\text{A}$	400 600		V
Peak forward or reverse blocking Current	I_{DRM} I_{RRM}	$V_{AK}=\text{Rated}$ V_{DRM} or V_{RRM}		10	μA
Holding current	I_H	$I_{HL}=20\text{mA}$, $V_{AK}=7\text{V}$		5	mA
Gate trigger current	I_{GT}	$V_{AK}=7\text{V}$	5	15	μA
			15	30	μA
			30	80	μA
			80	200	μA

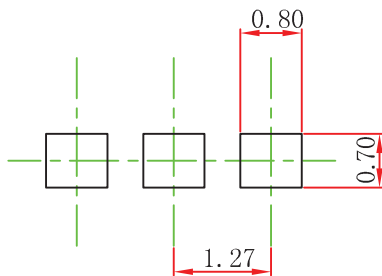
* Forward current applied for 1 ms maximum duration, duty cycle $\leq$ 1%.

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



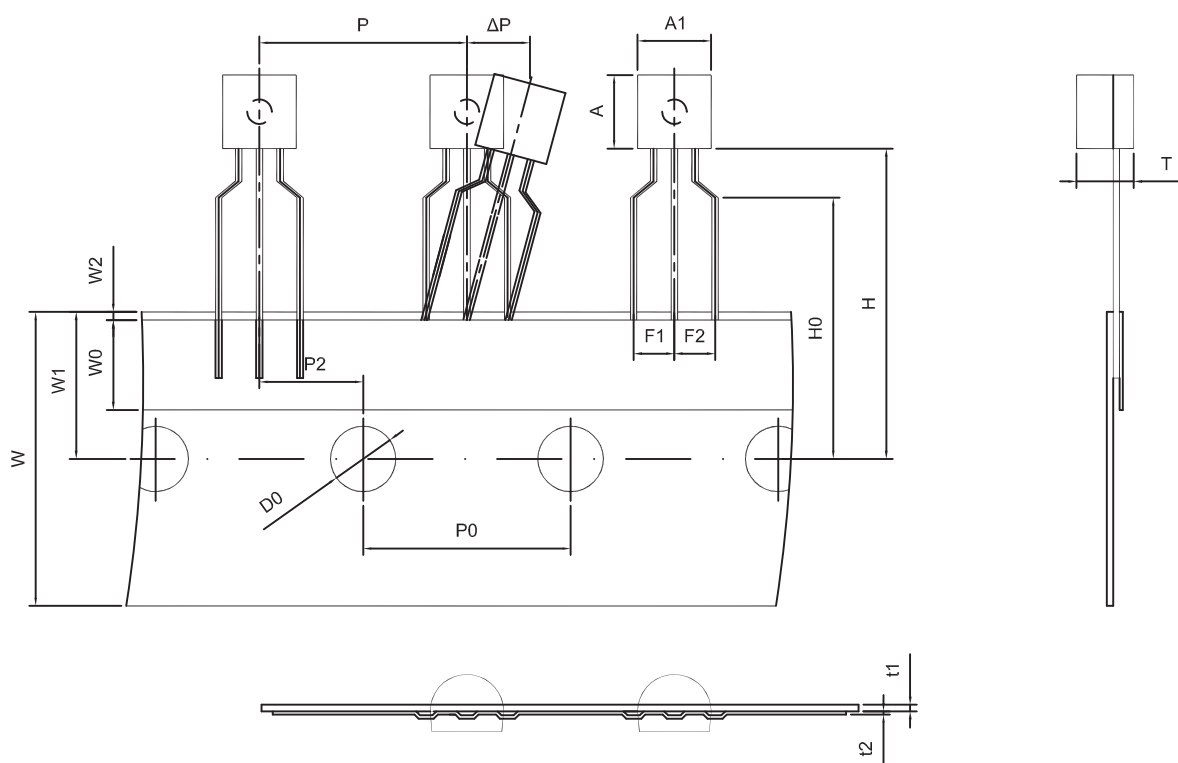
Note:

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

NOTICE

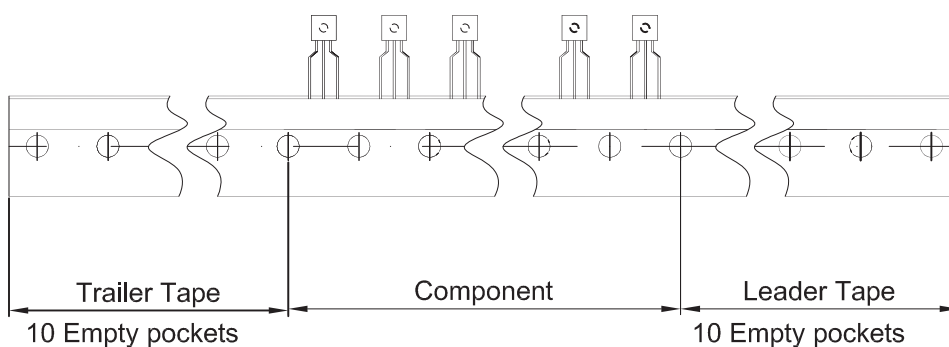
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TO-92 PACKAGE TAPEING DIMENSION



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