

MCR100-6

DATASHEET

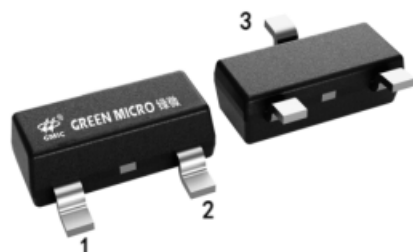
Specification Revision History:

Version	Date	Description
V1.0	2021/05	New
V1.1	2022/02	Modify Ordering Information
V1.2	2024/02	Modify Ordering Information
V1.3	2025/05	Add application precautions and overall typesetting.

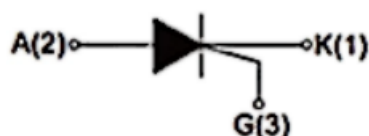
Features

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

The appearance of the product



SOT-23



Equivalent Circuit

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
MCR100-6-GM	SOT-23	MCR16	REEL	3000 PCS/REEL

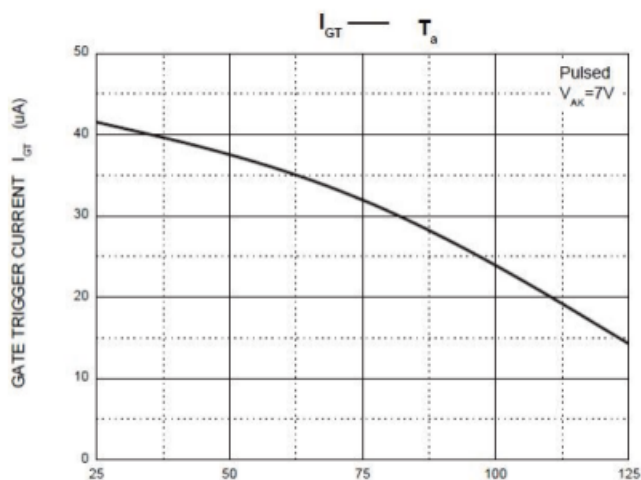
Absolute Maximum Ratings(TA=25°C)

Symbol	Parameter	Value	Unit
V _{DRM}	Repetitive peak off-state voltage	400	V
V _{EB0}	Emitter-Base Voltage	7	V
I _{T(RMS)}	RMS on-state current(T=60°C)	0.8	A
I _{TSM}	Non repetitive surge peak on-state current(tp=10ms)	8	A
I _{GM}	Peak gate current (tp=20μs,Tj=110°C)	0.2	A
P _{GM}	Peak gate power (tp=20μs,Tj=110°C)	500	mW
P _{G(AV)}	Average gate power dissipation(Tj=110°C)	100	mW
T _J	Operating Junction Temperature Range	-40~+110	°C
T _{stg}	Storage Temperature Range	-40~+150	°C

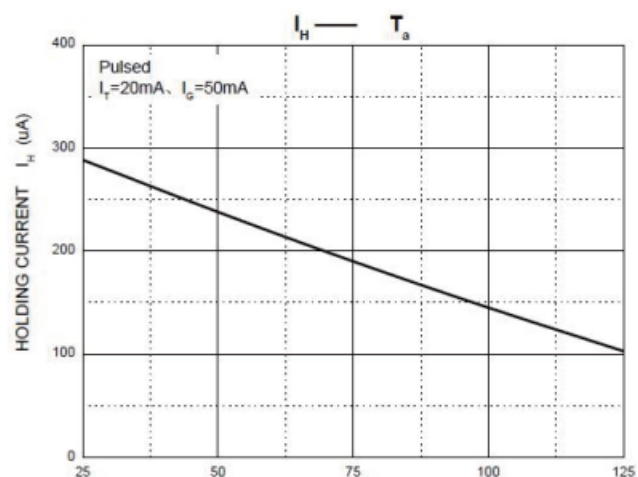
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V_{TM}	On state voltage	$I_{TM}=1\text{A}$, $t_p=380\mu\text{s}$			1.7	V
V_{GT}	Gate trigger voltage	$V_{AK}=7\text{V}$			0.8	V
$V_{(BR)EBO}$	Peak Repetitive forward and Reverse blocking voltage	$I_{DRM}/I_{RRM}=100\mu\text{A}$	400			V
I_{DRM}	Peak forward or reverse blocking Current	$V_{AK}=V_{DRM}$ or V_{RRM}			10	μA
I_{RRM}						
I_H	Holding current	$I_{HL}=20\text{mA}$, $V_{AK}=7\text{V}$			5	mA
I_{GT}	Gate trigger current	$V_{AK}=7\text{V}$	15		50	μA

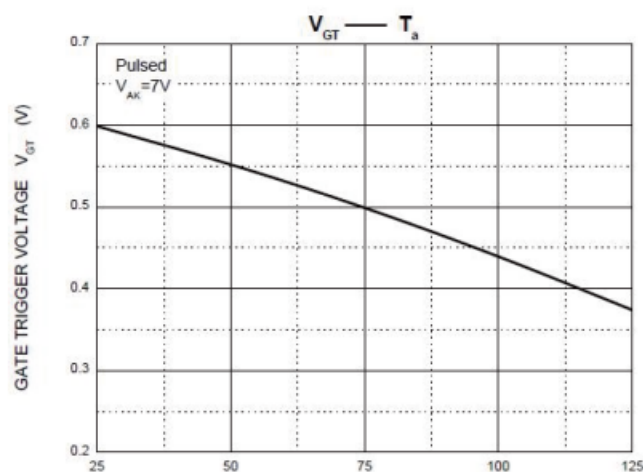
Typical Characteristics



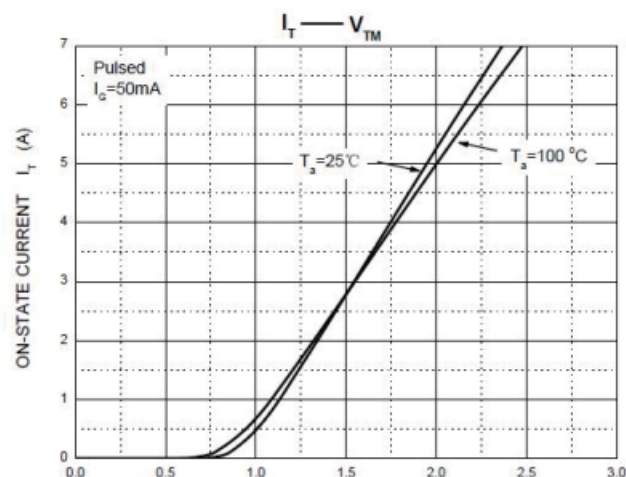
AMBIENTTEMPERATURE $T_a(^{\circ}\text{C})$



AMBIENTTEMPERATURE $T_a(^{\circ}\text{C})$

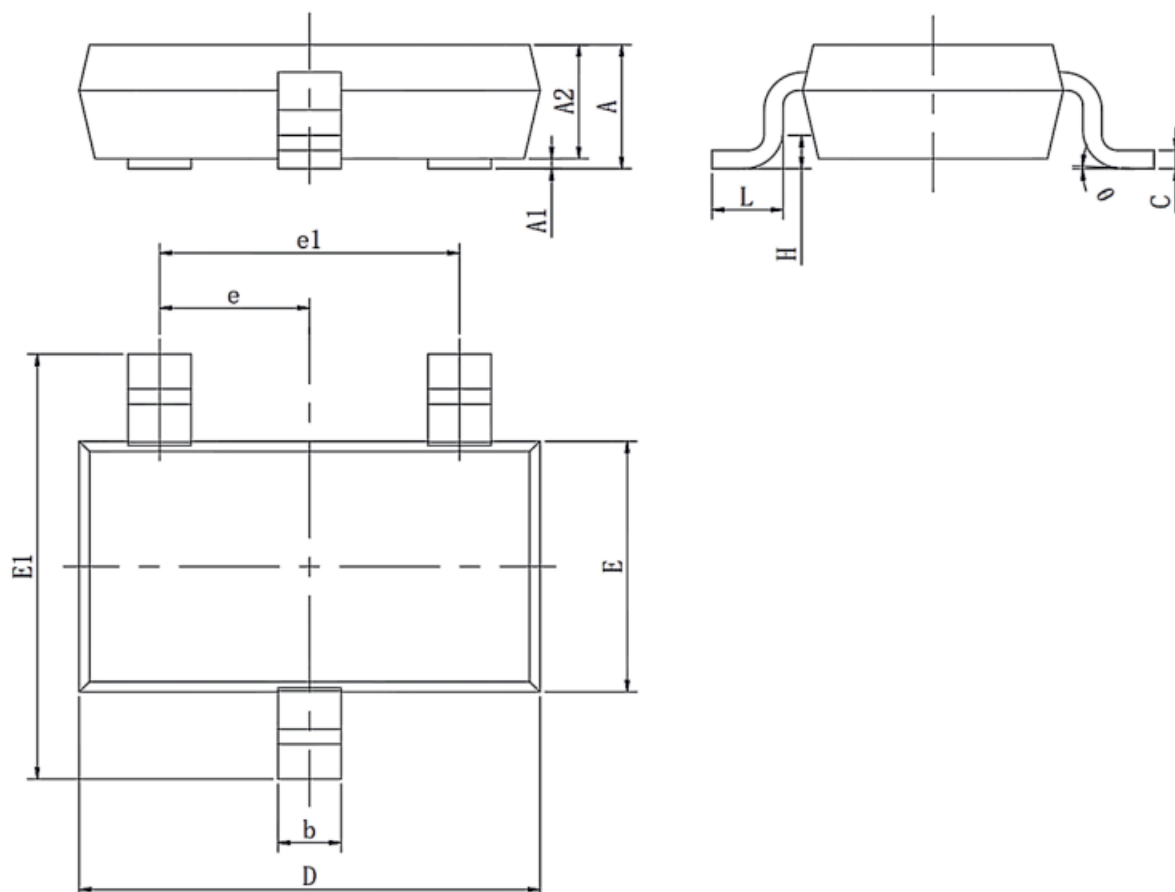


AMBIENTTEMPERATURE $T_a(^{\circ}\text{C})$



ON-STATEVOLTAGE $V_{TM}(\text{V})$

Outline Dimensions

SOT-23
Unit : mm


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
C	0.080	0.200	0.003	0.008
D	2.800	3.020	0.110	0.119
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.95 (BSC)		0.037(BSC)	
e1	1.90 (BSC)		0.075(BSC)	
L	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

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