

MCR100-6

DATASHEET

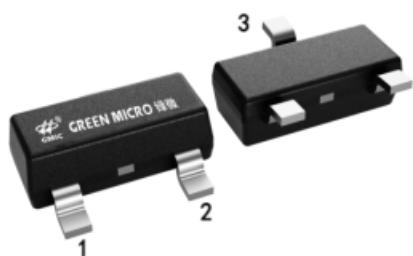
Specification Revision History:

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

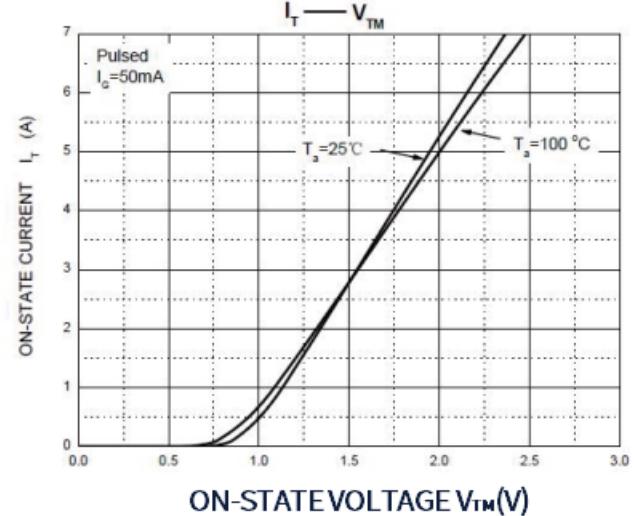
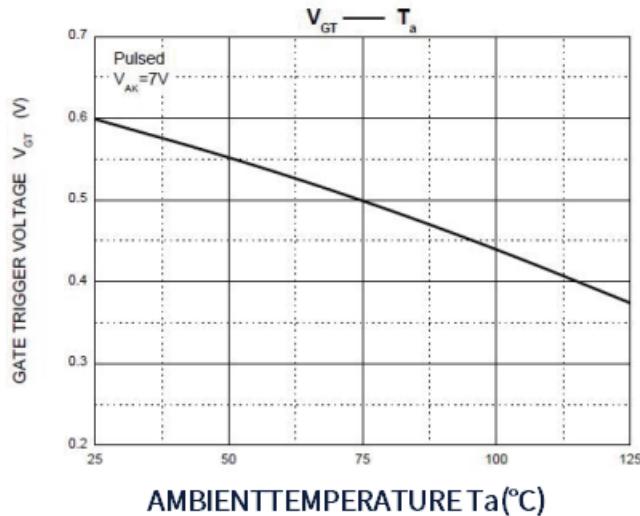
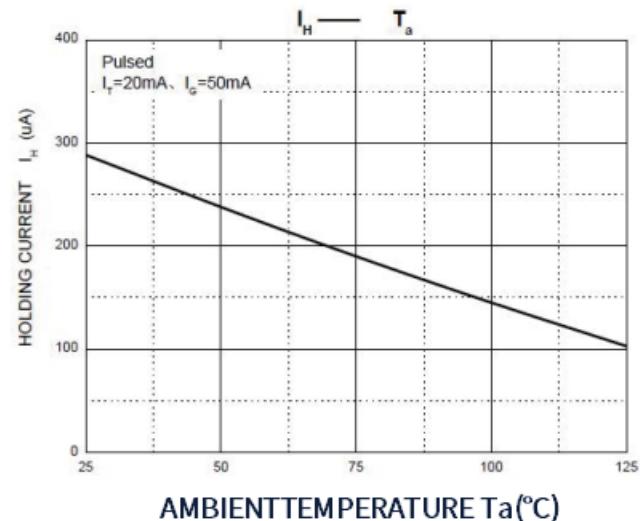
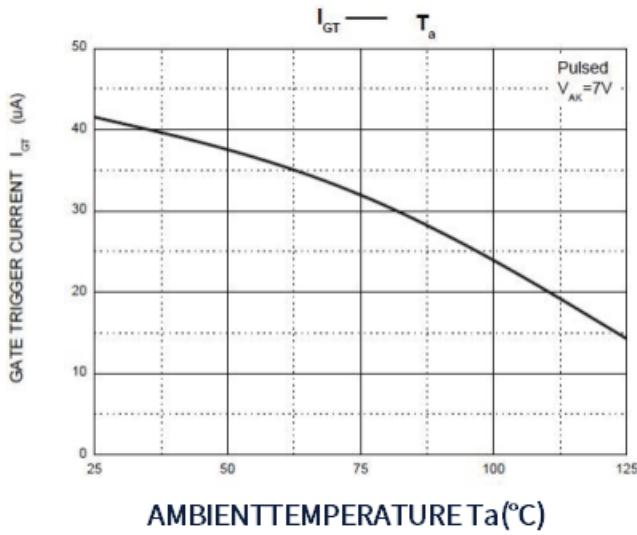
Product Model	Package Type	Marking	Packing	Packing Qty
MCR100-6-GM	SOT-23	MCR16	REEL	3000PCS/REEL

Absolute Maximum Ratings(TA=25°C)

Symbol	Parameter	Value	Unit
V_{DRM}	Repetitive peak off-state voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
$I_{T(RMS)}$	RMS on-state current($T=60^{\circ}\text{C}$)	0.8	A
I_{TSM}	Non repetitive surge peak on-state current($tp=10\text{ms}$)	8	A
I_{GM}	Peak gate current ($tp=20\mu\text{s}, T_j=110^{\circ}\text{C}$)	0.2	A
P_{GM}	Peak gate power ($tp=20\mu\text{s}, T_j=110^{\circ}\text{C}$)	500	mW
$P_{G(AV)}$	Average gate power dissipation($T_j=110^{\circ}\text{C}$)	100	mW
T_j	Operating Junction Temperature Range	-40~+110	°C
T_{stg}	Storage Temperature Range	-40~+150	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

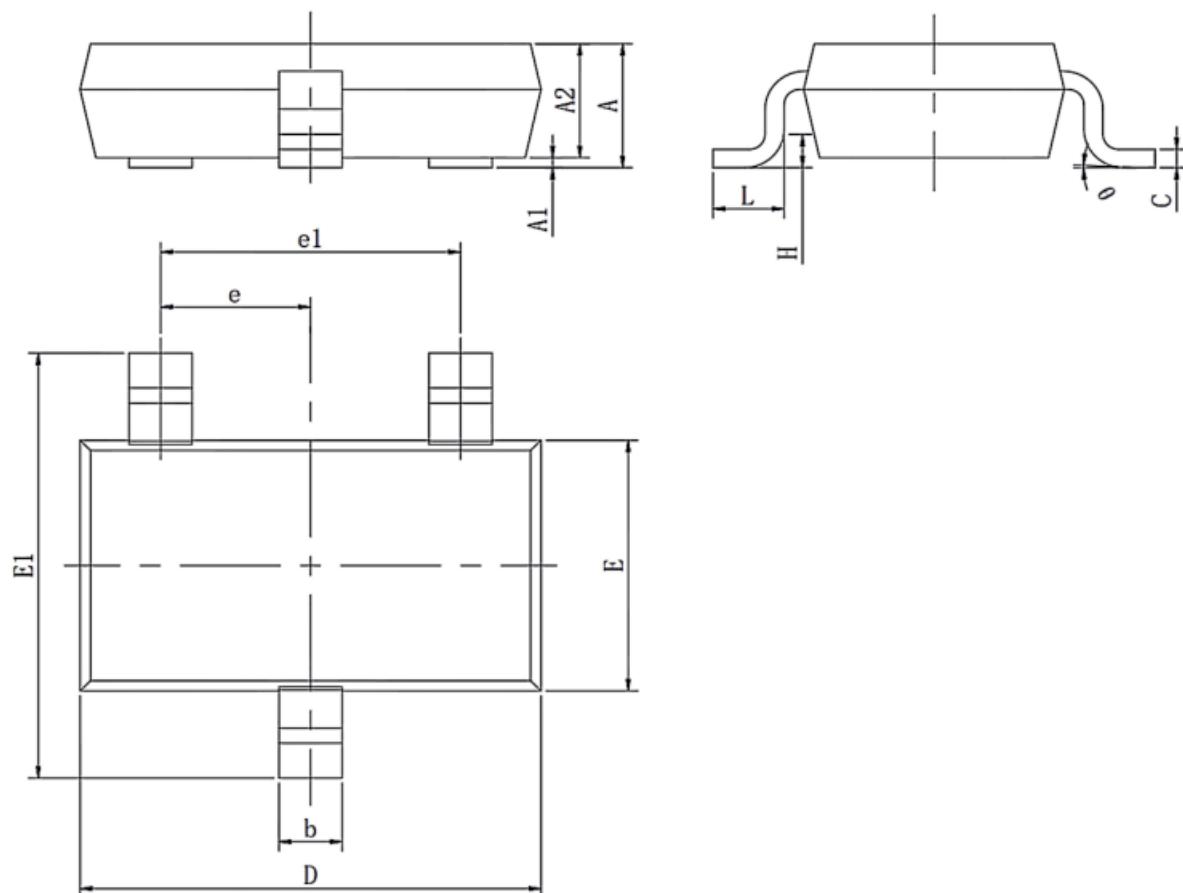
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V _{TM}	On state voltage	I _{TM} =1A ,tp=380μS			1.7	V
V _{GT}	Gate trigger voltage	V _{AK} =7V			0.8	V
V _{(BR)EBO}	Peak Repetitive forward and Reverse blocking voltage	I _{DRM} /I _{RRM} =100μA	400			V
I _{DRM}	Peak forward or reverse blocking Current	V _{AK} =V _{DRM} OR V _{RRM}			10	μA
I _{RRM}						
I _H	Holding current	I _{HL} =20mA ,V _{AK} =7V			5	mA
I _{GT}	Gate trigger current	V _{AK} =7V	15		50	μA

Typical Characteristics


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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