



HY100-6

Silicon Controlled Rectifier

■ GENERAL DESCRIPTION

The device designed for high volume, line-powered consumer applications such as relay and lamp drivers, small motor controls, gate drivers for larger thyristors, and sensing and detection circuits. Supplied in the SOT-23 package.

■ FEATURES

* $I_{T(RMS)}$ on-state current to 0.8 A

*Current -IGT:200 μ A

■ Typical Applications

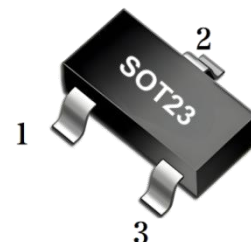
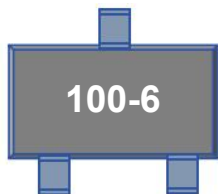
*Motor control

*Line-powered consumer applications

*Capacitive discharge ignitions

■ MARKING

Type Code: Marking: 100-6



1.KATHODE
2.GATE
3.ANODE

■ ABSOLUTE MAXIMUM RATINGS (TC=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITION	VALUE	UNIT
VDRM/VRRM	Repetitive Peak off-state/reverse voltage		400	V
IT(RMS)	Collector-Base Voltage		0.8	A
IDM	Gate Trigger Current		0.8	A
Tstg	Storage Temperature		-40 to +150	°C
Tj	Operating junction temperature		125	°C
RθJa	Maximum Junction-to-Ambient		400	°C/W
RθJc	Maximum Junction-to-Case		15	°C/W



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ELECTRICAL CHARACTERISTICS(T_j=25°C unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	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} = 10 μA			400	V
Peak forward or reverse blocking Current	I _{RRM}	V _{AK} = Rated V _{DRM} or V _{RRM} , R _{GK} =1kΩ			10	μA
	I _{DRM}				100	
Non-repetitive surge peak On-state current (T _J =25°C)	I _{TSM}	t _p =10ms			9	A
		t _p =8.3ms			10	
Peak Gate Current	I _{GM}	Pulse Width≤1.0μs, TA=25°C			1	A
Peak Gate Power	P _{GM}	Pulse Width≤1.0μs, TA=25°C			0.1	W
Gate trigger current	I _{GT}	V _{AK} =7V	A2		15	μA
			A1		30	
			A		80	
			B		200	
Critical Rate of Rise of Off-State Voltage	dV/dt	V _D =Rated V _{DRM} , Exponential Waveform, R _{GK} =1000Ω, T _J =110°C		20	50	V/μs
Critical Rate of Rise of On-State Current	di/dt	P _K =20A; P _w =10μsec. di _G /dt=1A/μsec, I _{gt} =20mA			50	A/μs
Holding Current	I _H	I _{HL} =20mA, V _{AK} =7V			5	mA

* Forward current applied for 1 ms maximum duration, duty cycle≤1%。



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■ TYPICAL CHARACTERISTICS

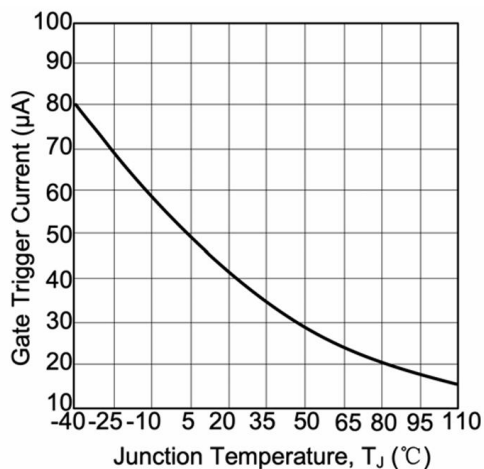


Fig 1. Typical Gate Trigger Current vs. Junction Temperature

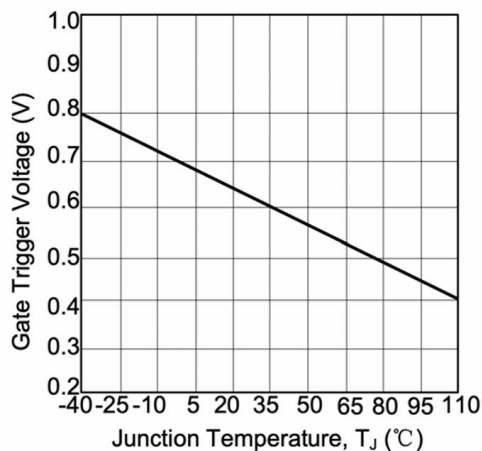


Fig 2. Typical Gate Trigger Voltage vs. Junction Temperature

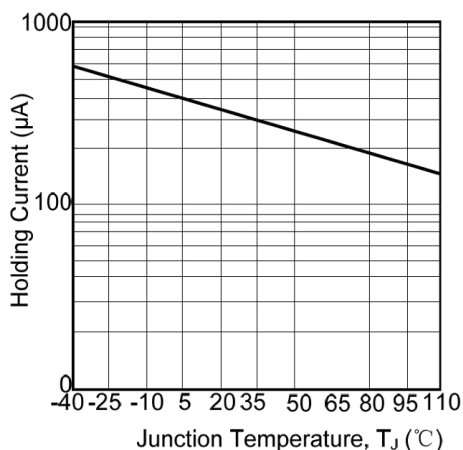


Fig 3. Typical Holding Current vs. Junction Temperature

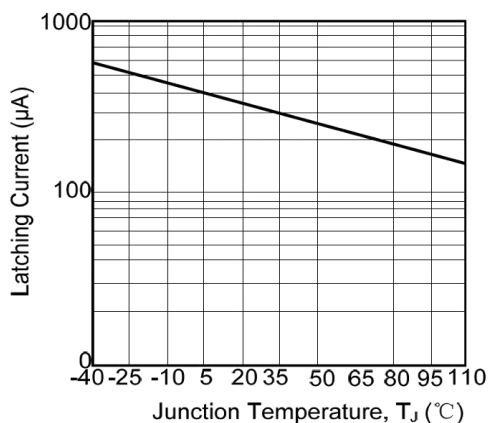


Fig 4. Typical Latching Current vs. Junction Temperature

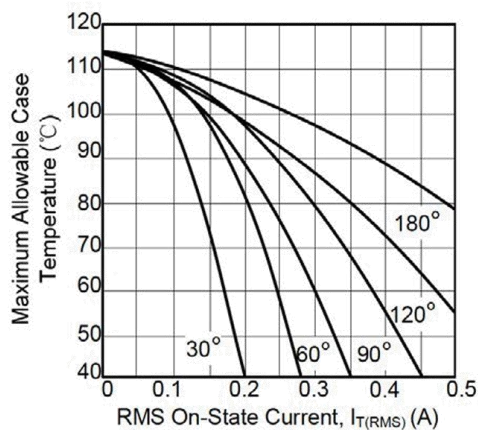


Fig 5. Typical RMS Current Derating

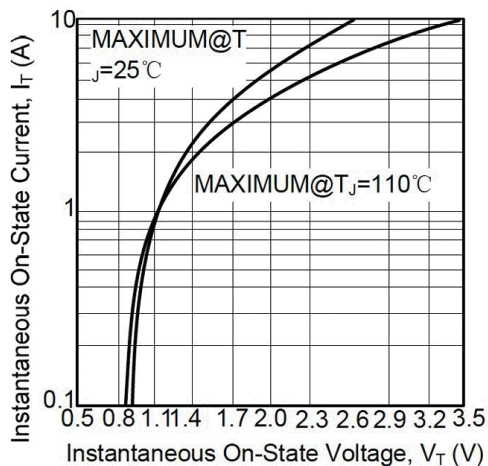


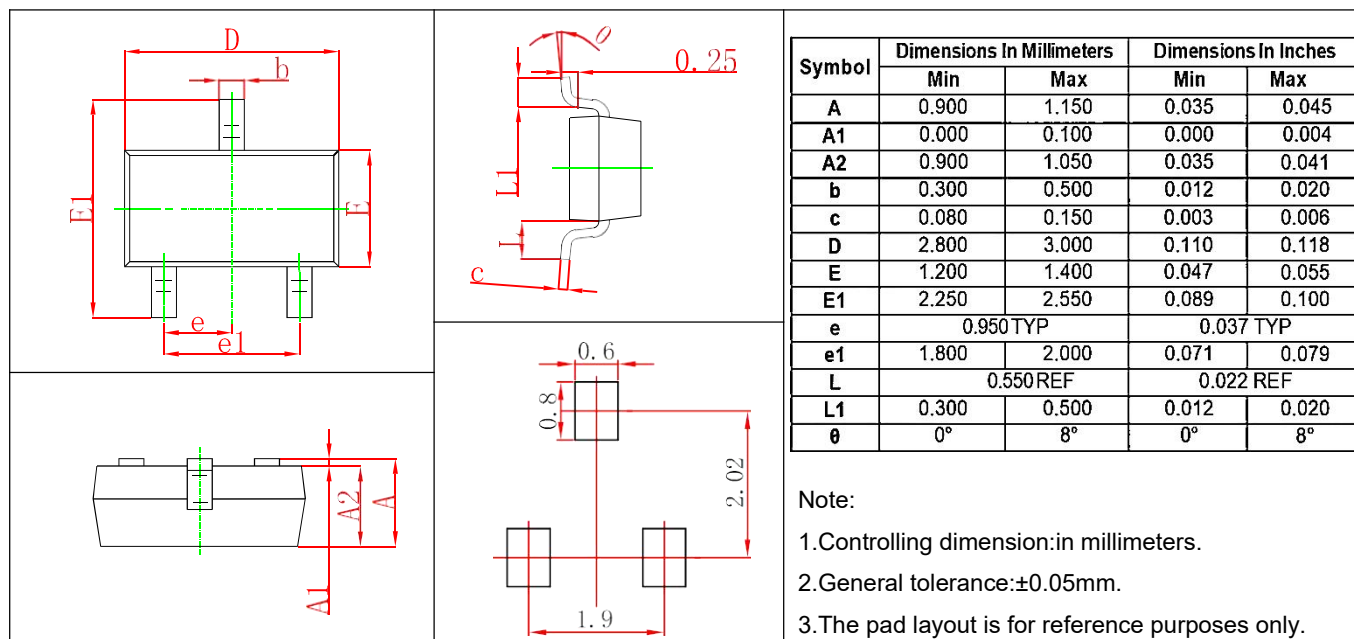
Fig 6. Typical On-State Characteristics



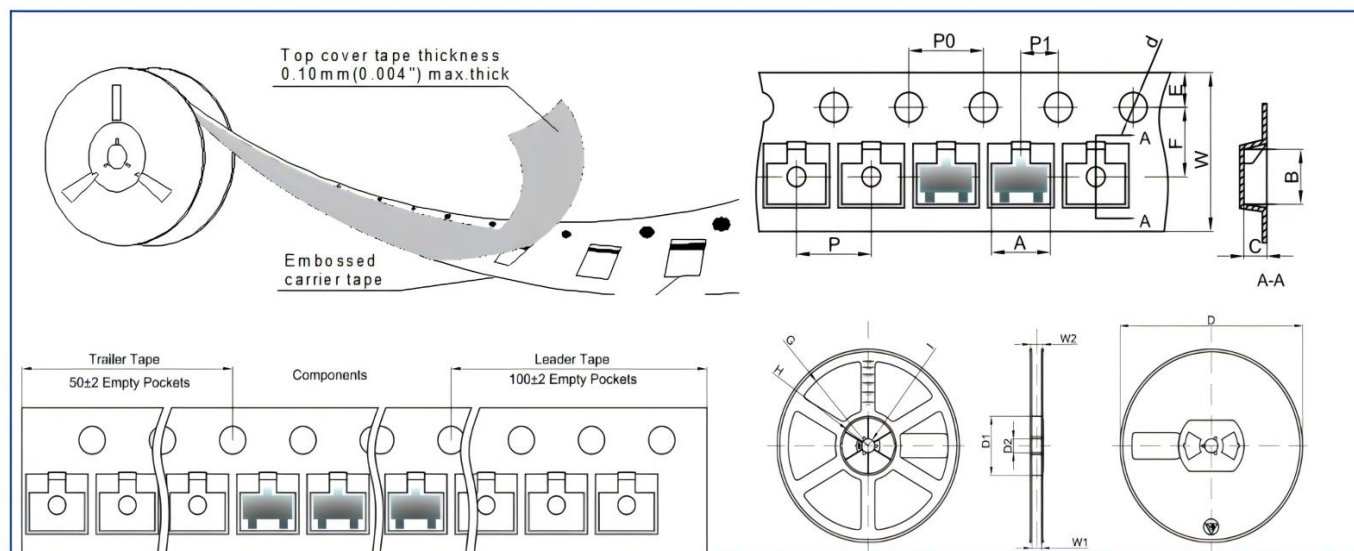
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SOT23 PACKAGE OUTLINE DIMENSIONS



REEL PACKING



Dimensions are in millimeter										
PKG TYPE	A	B	C	d	E	F	Po	P	P1	W
SOT-23	3.15	2.77	1.22	Φ1.50	1.75	3.50	4.00	4.00	2.00	8.00
Reel Option	D	D1	D2	G	H	I	W1	W2	Q.TY PER REEL	
7" Dia	Φ178.0	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30	3000PCS	
13" Dia	Φ330.0	/	13.00	/	/	R6.50	9.50	12.30	10000PCS	