

特性 Features

- 触点形式 Contact Form : 1 Form A (Zero-on 过零型/Random-on 随机型)
- 负载电压 Load Voltage : 110VAC/220VAC
- 负载电流 Load Current : 0.9A、1.2A、2A
- 漏电流 Low Off-State Leakage Current : 100μA

DIP7



SMD7



典型应用 Application

自动检测设备 Automatic Test Equipment
 通信设备 Telephone Equipment
 传感设备 Sensing Equipment

安全设备 Security Equipment
 I/O 模块 I/O Modules
 调制解调器 Modem

■ 绝对最大额定值 Absolute Maximum Ratings (Ta=25°C)

项目 Item	符号 Symbol	ST3M-2213/2223	ST3M-3213/3223	ST3M-5213/5223	备注 Remarks	
输入 Input	工作电流 LED Forward Current	I_F	50mA			
	正向峰值电流 Peak Forward Current	I_{FP}	1000mA			f=100Hz, 占空比 Duty Ratio=0.1%
	反向电压 LED Reverse Voltage	V_R	5V			
输出 Output	负载电压 Load Voltage	V_L	110VAC/220VAC			峰值 Peak AC, DC
	断态重复瞬间电压 Repetitive Peak OFF-state Voltage	V_{DRM}	600V			
	连续负载电流 Continuous Load Current	I_L	0.9A	1.2A	2A	
	浪涌电流 Non-repetitive surge Current	I_{peak}	9A	12A	20A	100ms(1shot), $V_L=DC$
输入输出间隔离电压 I/O Isolation Voltage	$V_{I/O}$	5000Vrms				
工作温度 Ambient Temperature(Operating)	T_{opr}	-40°C ~ +85°C			应无结冰、凝露 Avoid Icing and Condensation	
储存温度 Ambient Temperature(Storage)	T_{stg}	-40°C ~ +125°C				

■ 电气性能概要 Electrical Specifications (Ta=25°C)

项目 Item	符号 Symbol	ST3M-2213/2223	ST3M-3213/3223	ST3M-5213/5223	测定条件 Conditions	
输入 Input	正向电压 LED Forward Voltage	V_F	1.18V			$I_F=10mA$
	典型值 Typ.		1.4V			
	最大值 Max.	I_{FT}	2mA			
最小触发电流 Minimum Trigger Current	10mA					
	反向电流 Reverse Current	I_R	10μA			$V_R=5V$
输出 Output	导通电压降 On-State Voltage	V_{TM}	1.3V	1.1V	0.9V	$I_T=Rating$
	典型值 Typ.		2.3V			
	最大值 Max.	I_{DRM}	100μA			$V_{DRM}=600V$
	漏电流峰值 Peak Off-State Current		25mA			
	维持电流 Holding Current	I_H	1000V/μS			$V_{DRM} V 2$
电压指数上升率 Rise rate of OFF-state	dv/dt	200V/μS				
传输特性 Transfer Characteristics	导通时间 Turn-on Time(Random-on)	T_{ON}	8μS			$I_F=20mA$
	典型值 Typ.		100μS			
	最大值 Max.	T_{OFF}	10ms			
	关断时间 Turn-off Time		10ms			
导通时间 Turn-on Time(Zero-on)	T_{ON}	10ms				
输入输出间绝缘电阻 Initial I/O Isolation Resistance	$R_{I/O}$	50GΩ			500VDC	

ST3M-□2□3 固态继电器 Solid State Relays

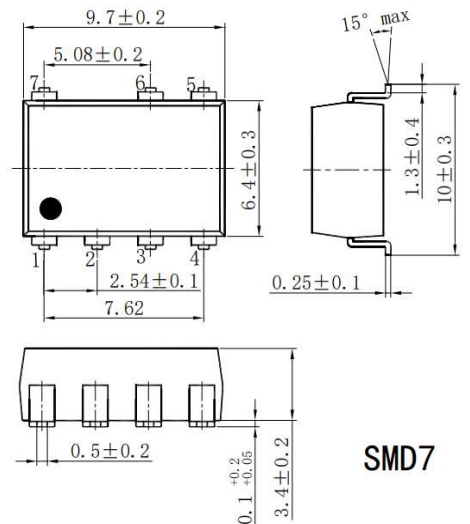
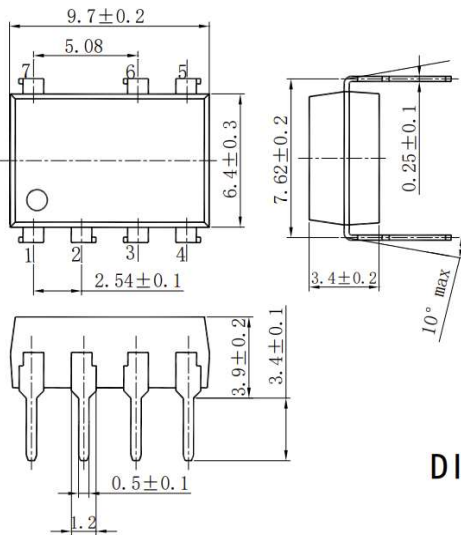
型号命名标准 Model Number Legend

基本型号 Basic Type: ST3M	2	1	3	A	TR
负载电流类型 Load Current Type: 2: 0.9A负载电流 0.9A Load Current 3: 1.2A负载电流 1.2A Load Current 5: 2.0A负载电流 2.0A Load Current					
断态重复瞬间电压 Repetitive Peak OFF-state Voltage: 2: 600V					
触点形式 Contact Form: 1: 过零型 Zero-on; 2: 随机型 Random-on					
引脚数量 Number of Pin: 3: 7 脚 7 Pin					
封装 Package: Blank: DIP (双列直插式封装 Dual In-line Package); A: SMD (表面安装端子--DIP间距 Surface Mount Terminal, as DIP Spacing)					
包装形态 Packing style: Blank: 管装 Tube; TR: Tape and Reel					

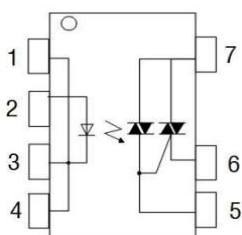
具体型号列表 List of Models

类别 Category	额定输出 Output Rating		触点形式 Contact Form	标刻型号 Marking Model	订货型号 Part No. DIP	订货型号 Part No. SMD
	负载电压 Load Voltage	负载电流 Load Current				
AC/DC 两用 Daul Use	110V/220V	0.9A	过零型 Zero-on/ 随机型 Random-on	ST3M-2213	ST3M-2213	ST3M-2213ATR
			过零型 Zero-on	ST3M-2223	ST3M-2223	ST3M-2223ATR
		1.2A	过零型 Zero-on	ST3M-3213	ST3M-3213	ST3M-3213ATR
			随机型 Random-on	ST3M-3223	ST3M-3223	ST3M-3223ATR
		2A	过零型 Zero-on	ST3M-5213	ST3M-5213	ST3M-5213ATR
			随机型 Random-on	ST3M-5223	ST3M-5223	ST3M-5223ATR

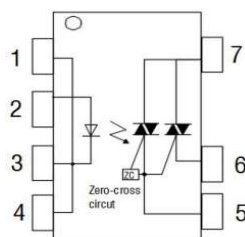
外形尺寸 Outline Dimensions



引脚标识 Terminal Identification

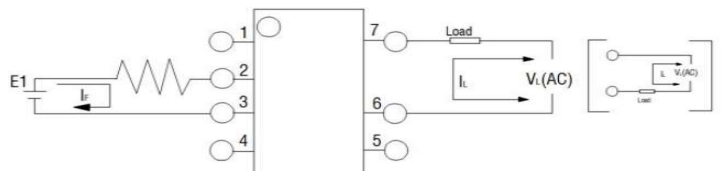


Random-on 随机型



Zero-on 过零型

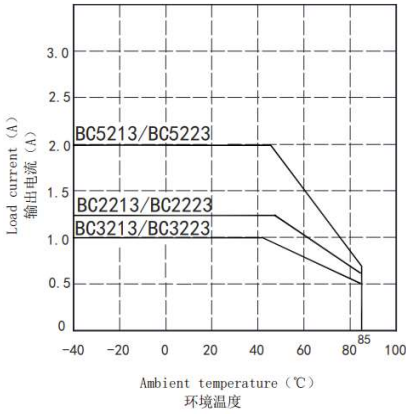
接线图 Wiring Diagram



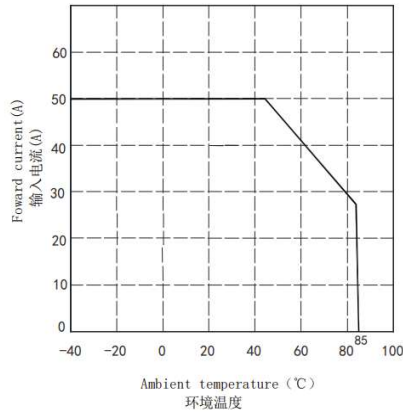
ST3M-□2□3 固态继电器 Solid State Relays

■ 参考数值 Reference Data

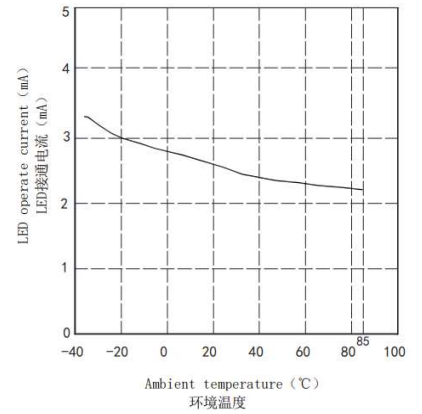
Load current Vs. Ambient temperature
输出电流-环境温度曲线



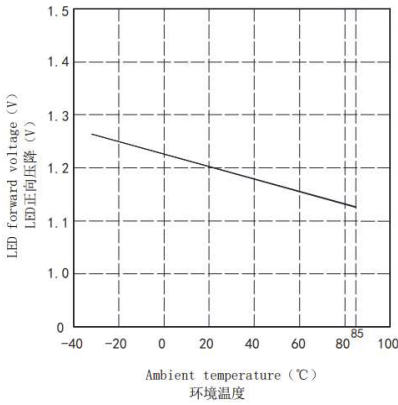
Foward current Vs. Ambient temperature
输入电流-环境温度曲线



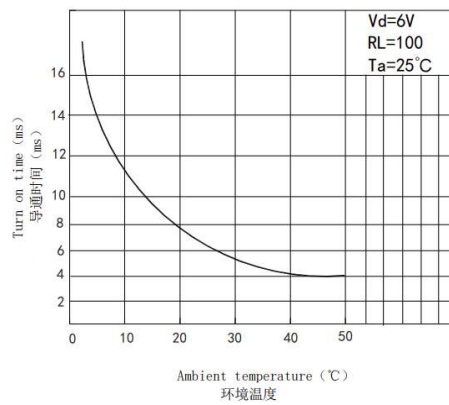
LED operate current Vs. Ambient temperature
接通电流-环境温度曲线



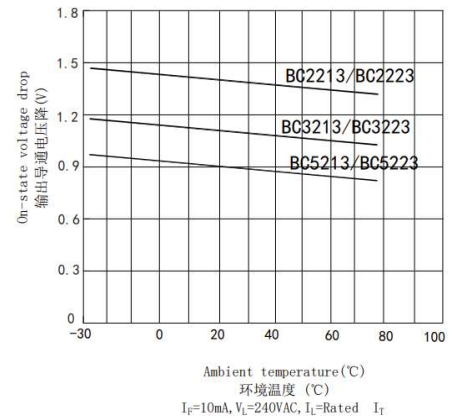
LED forward voltage Vs. Ambient temperature
LED正向电压-环境温度曲线



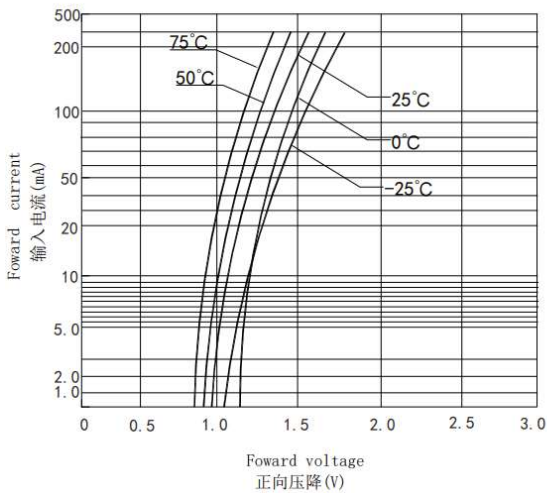
Turn on time Vs. Foward current
导通时间-输入电流曲线



On-state voltage drop VS. Ambient Temperature
输出导通电压降-环境温度曲线



Foward current VS. Foward voltage
输入电流-正向电压降曲线



On-state load current VS. On-state voltage drop
输出电流-导通电压降曲线

