

DATA SHEET

**ELECTROSTATIC DISCHARGE
PROTECTION DEVICES**

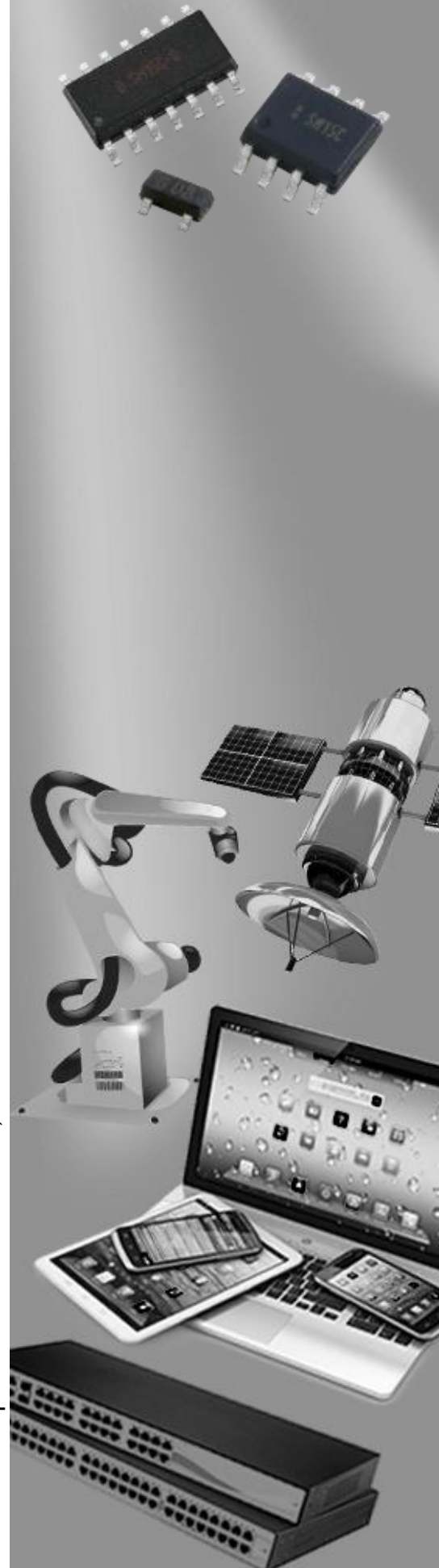
INDUSTRIAL / CONSUMER

SWS08CXXL03 series

RoHS compliant & Halogen free



Product specification— November 27, 2018 V.0



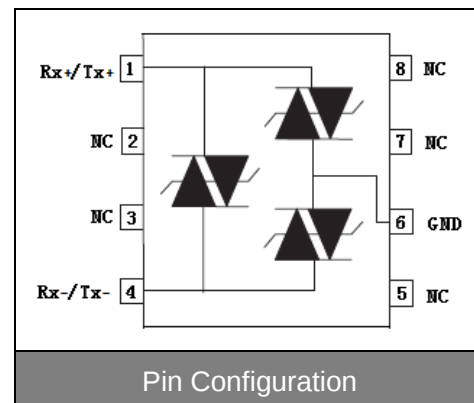
Electrostatic Discharged Protection Devices (ESD) Data Sheet

Description

SWS08C06L03 is a low voltage transient surge absorbing device, it is mainly used to protect sensitive communications equipment from lightning and other transient phenomenon

Features

- SOIC-08 surface mount package
- Protects three high speed data lines
- Working voltage:6V
- Lead Free/ROHS compliant



Applications

- XDSL transmission equipment
- Data cable
- T1/E1 transmission protection
- Ethernet transmission protection

Maximum Ratings

Rating	Symbol	Value	Unit
Peak Pulse Current(10/1000us)	I_{PP}	45	A
Peak Pulse voltage(10/700us)	V_{PP}	3000	V
Operating Junction Temperature	T_J	-40 to +150	°C
Storage Temperature Range	T_S	-40 to +150	°C
Junction to Ambient on printed circuit	$R_{\theta JA}$	170	°C/W

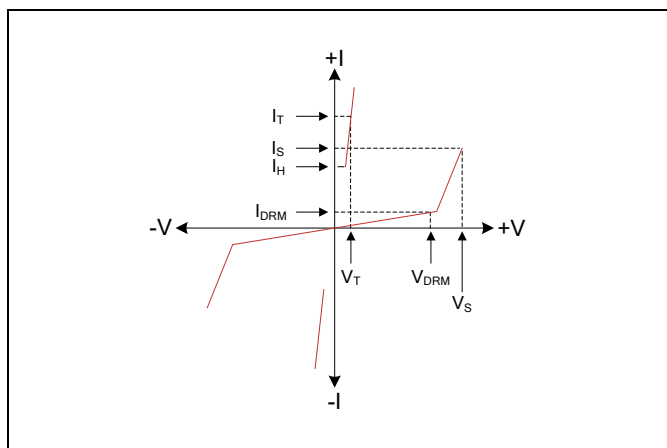
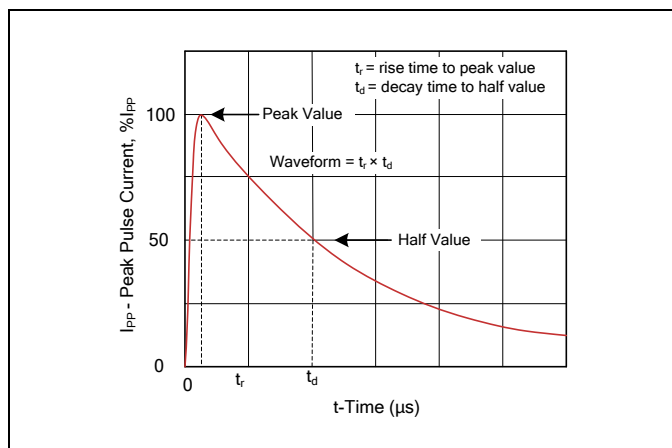
Electrical Characteristics ($T_J=25^{\circ}\text{C}$)

SWS08C06L03 (Marking: P08A-3)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				6	V
Breakover voltage	V_{BO}	1KV/ μs			15	V
On-state Voltage	V_T	$I_T=2.2\text{A}$			4	V
Reverse leakage current	I_R	$V_R=6\text{V}$			5	μA
Holding Current	I_H	10A, 10/1000 μs		10		mA
Off state capacitance	C_O	1Vdc, f=1MHz, 2Vbias		50		pF

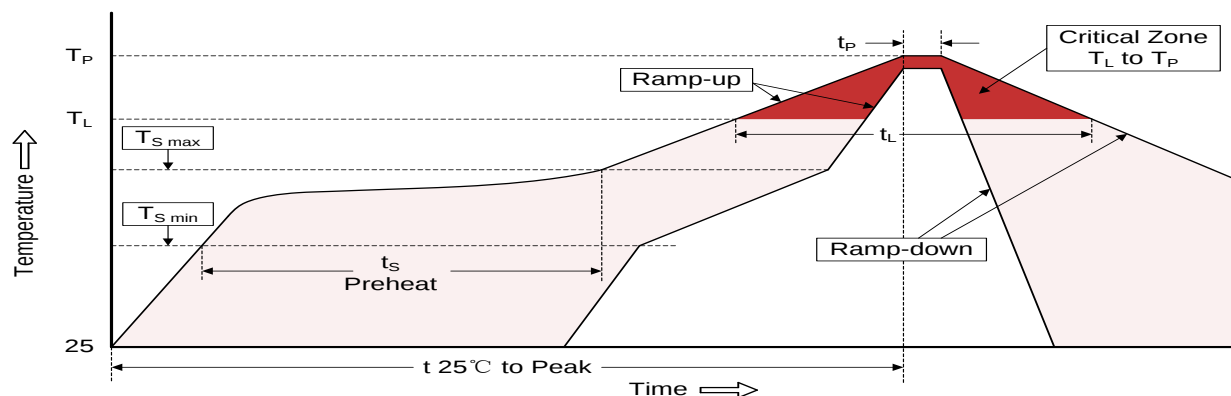
Typical Characteristics Curves

Figure 1. V-I Characteristics

Figure 2. $t_r \times t_d$ Pulse Wave-form

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S \text{ min}}$)	150°C
-Temperature Max ($T_{S \text{ max}}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S \text{ max}}$ to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Dimensions (SOIC-08)

Symbol	Dimension			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.80	5.00	0.189	0.197
B	5.80	6.20	0.228	0.244
C	3.80	4.00	0.150	0.157
D	1.27		0.050	
E	0.33	0.51	0.013	0.020
F	0.40	1.27	0.016	0.050
G	0.19	0.25	0.007	0.010
H	1.35	1.75	0.053	0.069
H1	0.10	0.25	0.004	0.010
H2	1.45		0.057	

Packaging

Tape	Symbol	Dimension (mm)
	W	12.00±0.30
	P0	4.00±0.10
	P1	8.00±0.10
	P2	2.00±0.10
	D0	Φ1.55±0.10
	D1	Φ1.55±0.05
	E	1.75±0.10
	F	5.50±0.10
	A	6.50±0.10
	B	5.40±0.10
	K	2.00±0.10
	t	0.30±0.05
	D	Φ330.0±3.0
	D2	Φ13.0
	W1	13.5
Reel		Quantity: 2500PCS