

DESCRIPTION

SELCO5CDQ is a design which includes ESD rated diode arrays to protect high speed data interfaces. The SELCO5CDQ has been specifically designed to protect sensitive components which are connected to data and transmission lines from over-voltage caused by Electrostatic Discharging (ESD).

SELCO5CDQ is a unique design which includes ESD rated, low capacitance steering diodes and a unique design of clamping cell which is an equivalent TVS diode in a single package. During transient conditions, the steering diodes direct the transient to ground line. The internal unique design of clamping cell prevents over-voltage on the data line, protecting any downstream components.

FEATURES

- >100 Watts Peak Pulse Power per Line (tp=8/20μs)
- >Protects Two Lines
- >Operating voltage: 5V
- >Low clamping voltage
- >Weight: 8.0mg

APPLICATIONS

- >Cellular Handsets & Accessories
- >Antennas
- >High Speed I/O Lines
- >Keypads, Side Keys, LCD Displays
- >Battery, Power Lines
- >Notebooks & Desktop Computers

IEC COMPATIBILITY

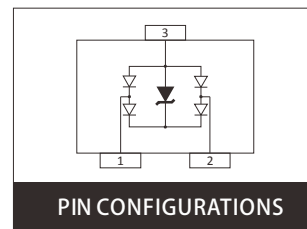
- >IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- >IEC61000-4-4 (EFT) 40A (5/50ns)
- >IEC61000-4-5 (Lightning) 4A (8/20μs)

MAXIMUM RATINGS @ 25° C UNLESS OTHERWISE SPECIFIED

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20μs waveform)	PPP	100	Watts
Lead Soldering Temperature	TL	260(10 sec.)	°C
Operating Temperature Range	TJ	-55~150	°C
Storage Temperature Range	TSTG	-55~150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25° C UNLESS OTHERWISE SPECIFIED

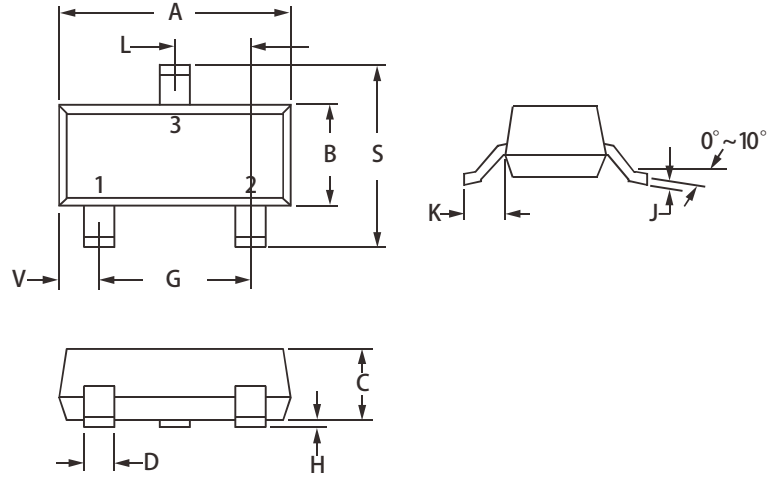
PART NUMBER	DEVICE MARKING	VRWM	Vb	IT	Vc @1A	Vc		IR	CT
		(V) Max.	(V) Min.	(mA)	Max.	Max.	@A	(uA) Max.	(pF) Typ.
SELCO5CDQ	R22	5.0	6.0	1	12.0	25.0	4.0	1	0.4



SOT-23 PACKAGE INFORMATION

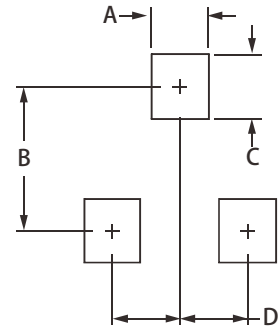
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.89	1.11	0.035	0.044
D	0.37	0.50	0.015	0.020
G	1.78	2.04	0.070	0.081
H	0.013	0.100	0.001	0.004
J	0.085	0.177	0.003	0.007
K	0.45	0.60	0.018	0.024
L	0.89	1.02	0.035	0.040
S	2.10	2.50	0.083	0.098
V	0.45	0.60	0.018	0.024

NOTES
 1. Controlling dimension: inches.
 2. Dimensions are exclusive of mold flash and metal burrs.



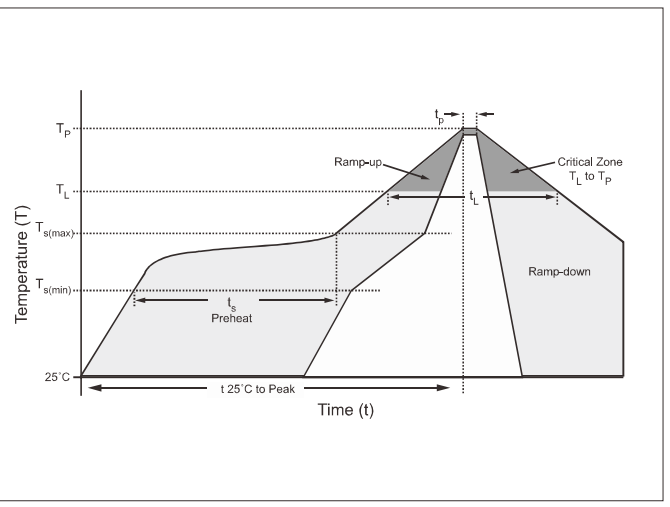
PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

NOTES
 1. Controlling dimension: inches.



SOLDERING PARAMETERS

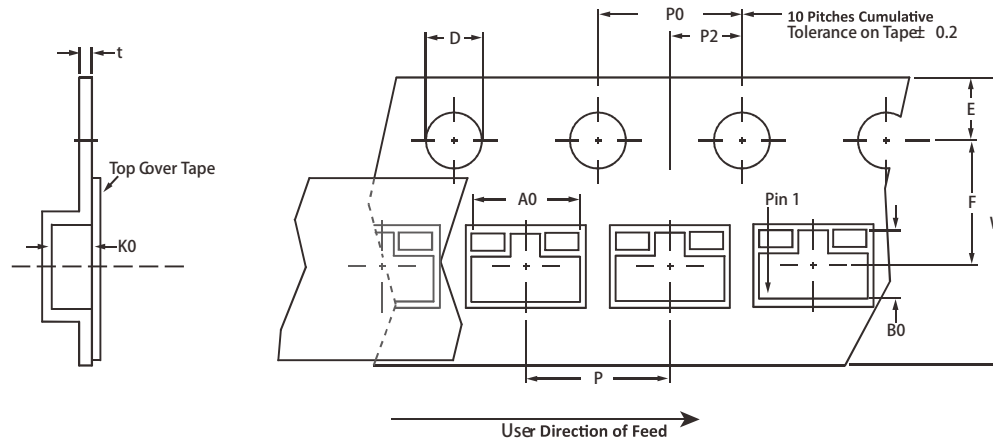
Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max))	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/second max
Ts(max) to TL - Ramp-up Rate		3°C/second max
Reflow	Temperature (TL) (Liquidus)	217°C
	Time (min to max) (ts)	60 – 150 seconds
Peak Temperature (TP)		260°C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (TP)		8 minutes Max.
Do not exceed		260°C



ENVIRONMENTAL CHARACTERISTICS

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature:150±3℃,Bias=80%V _{DRM} ;Time:168H
High Temperature Life Test	Temperature:150℃;Time:168H
High-Low Temperature Cycle Test	Temperature:From -40℃ to 150℃;Dwell Time:30min,10-100 Cycles
High Temperature&High Humidity Test	Temperature:85℃.Humidity:85%; Time:168H
Pressure Cooker Test	Temperature:121℃,2 atm.Humidity:100%; Time:24H To 168H
Resistance Of Soldering Heat	Temperature:260±5℃;Time Of Dip Soldering:10s,3 Times

TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	3.15 ± 0.10	2.77 ± 0.10	1.30 ± 0.10	1.55 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.228
NOTES 1. Dimensions are in millimeters. 2. Surface mount product is taped and reeled in accordance with EIA-481.												

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SELC05CDQ	SOT-23	3000PCS	7"

CONTACT US

Headquarters

Room 43A, Block C, E lectronic and Technology Building, Shennan Road, Futian District, Shenzhen
China

Hotline

+86-0755-83239646

Web

[Http://www.szshaoxin.com](http://www.szshaoxin.com)

By Telephone

General: +86-0755-83239646

By Fax

+86-0755-83239644
