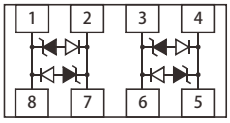
SELC33CP8
Low Capacitance TVS Diode Array

DESCRIPTION

The SELC33CP8 is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability,low leakage,and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

DFN2010P8 PACKAGE



PIN CONFIGURATIONS

FEATURES

> 150 Watts Peak Pulse Power per Line (tp=8/20μs)
> Protects Up To Two Bidirectional I/O Lines
> Operating voltage: 3.0V
> Low Capacitance (1pF) For High-Speed Interfaces
> Ultra-small Package Requires Less Than 2.0x1.0mm of PCB area

APPLICATIONS

> 10/100/1000 Ethernet
> Integrated Magnetics/RJ-45 Connectors
> LAN/WAN Equipment
> Security Cameras
> Industrial Controls
> Peripherals

IEC COMPATIBILITY

>IEC61000-4-2 (ESD) ±25kV (air), ±15kV (contact)
>IEC61000-4-4 (EFT) 40A (5/50ns)
>IEC61000-4-5 (Lightning) 10A (8/20μs)

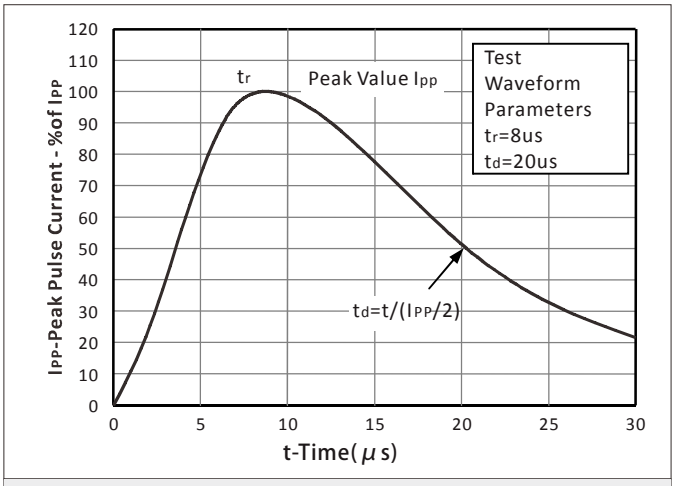
MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20μs waveform)	P_{PP}	150	Watts
Lead Soldering Temperature	T_L	260(10 sec.)	°C
Operating Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

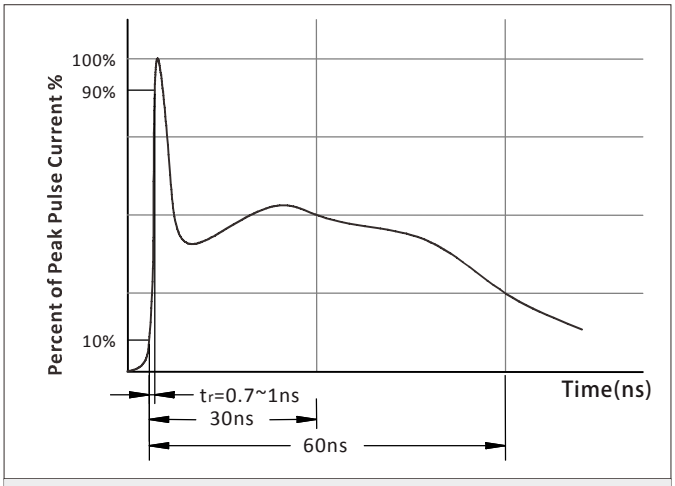
ELECTRICAL CHARACTERISTICS PER LINE @25°C UNLESS OTHERWISE SPECIFIED

PART NUMBER	DEVICE MARKING	V_{RWM} (V) Max.	V_B (V) Min.	I_T (mA)	V_C @1A Max.	V_C Max.	@A	I_R (uA) Max.	C_T (pF) Typ.
SELC33CP8	U33	3.0	3.5	1	7.0	15.0	10.0	1	1

CHARACTERISTIC CURVES



8/20 μs Pulse Waveform



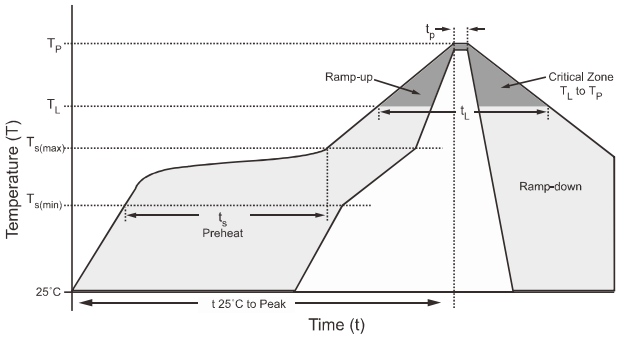
ESD Pulse Waveform (according to IEC 61000-4-2)

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

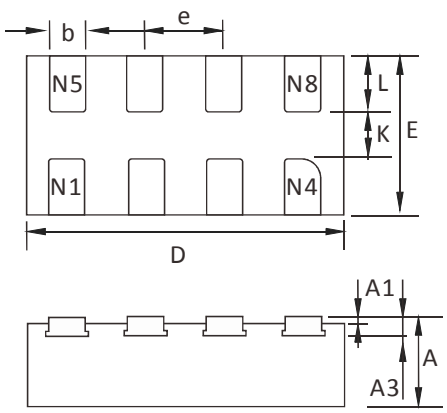
REFLOW PROFILE

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 (T_L) to peak		3°C/second max
Ts(max)to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (ts)	60 – 150 seconds
Peak Temperature (T_P)		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 (T_P)		8 minutes Max.
Do not exceed		260°C



DFN2010P8 PACKAGE INFORMATION

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.70	0.70	0.028	0.031
A1	0	0.05	0	0.002
A3	(0.12)		(0.005)	
D	1.92	2.10	0.076	0.082
E	0.92	1.10	0.036	0.042
K	0.20	-	0.008	-
b	0.18	0.28	0.007	0.011
e	0.50 BSC.		0.020 BSC.	
L	0.27	0.43	0.011	0.017



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SELC33CP8	DFN2010P8	3000PCS	7"

CONTACT US

Headquarters
Room 43A, Block C, Electronic and Technology Building, Shennan Road, Futian District, Shenzhen
China

Hotline
+86-0755-83239646

Web
Http://www.szshaoxin.com

By Telephone
General: +86-0755-83239646

By Fax
+86-0755-83239644