

1 Characteristics

Table 1. Absolute maximum ratings ($T_{amb} = 25\text{ }^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{PP}	ESD discharge IEC 61000-4-2		
	Air discharge	30	kV
	Contact discharge	30	
I_{SPK}	Maximum rms current per channel	350	mA
T_j	Junction temperature range	-30 to 125	$^{\circ}\text{C}$
T_{stg}	Storage temperature range	-55 to + 150	$^{\circ}\text{C}$

Figure 3. Electrical characteristics - definitions

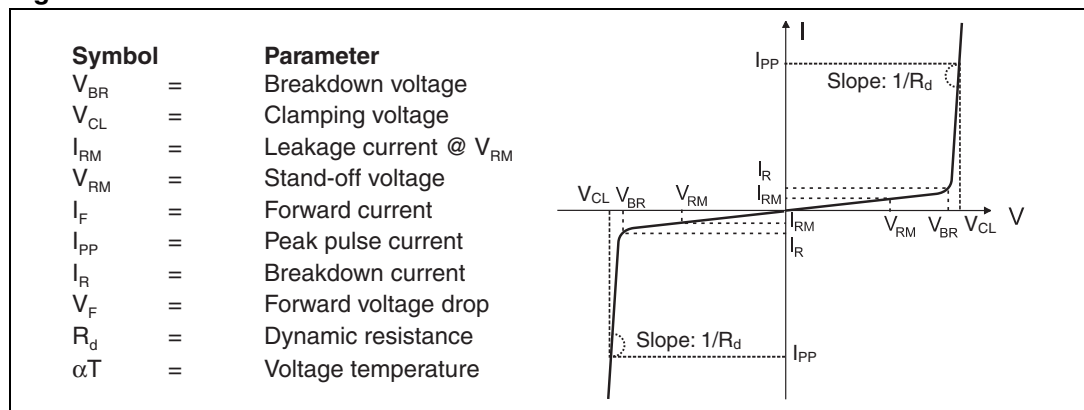


Table 2. Electrical characteristics - values ($T_{amb} = 25\text{ }^{\circ}\text{C}$)

Symbol	Test conditions	Min	Typ	Max	Unit
V_{BR}	$I_R = 1\text{ mA}$	6			V
I_{RM}	$V_{RM} = 3\text{ V}$			400	nA
$R_{I/O}$			0.35	0.8	Ω
C_{LINE}	$V_R = 0\text{ V DC}, 1\text{ MHz}$	185	250	315	pF
F_c	Cut-off frequency: $Z_{SOURCE} = Z_{LOAD} = 50\ \Omega$		20		MHz

Figure 4. Attenuation measurements versus frequency

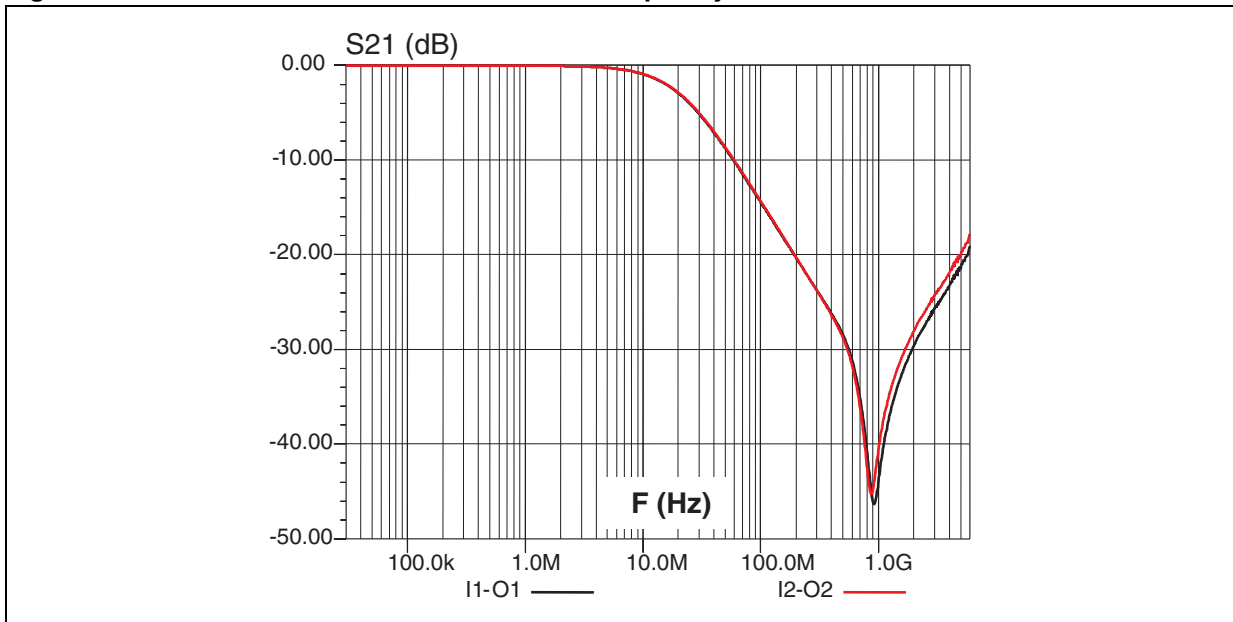


Figure 5. Crosstalk measurements versus frequency

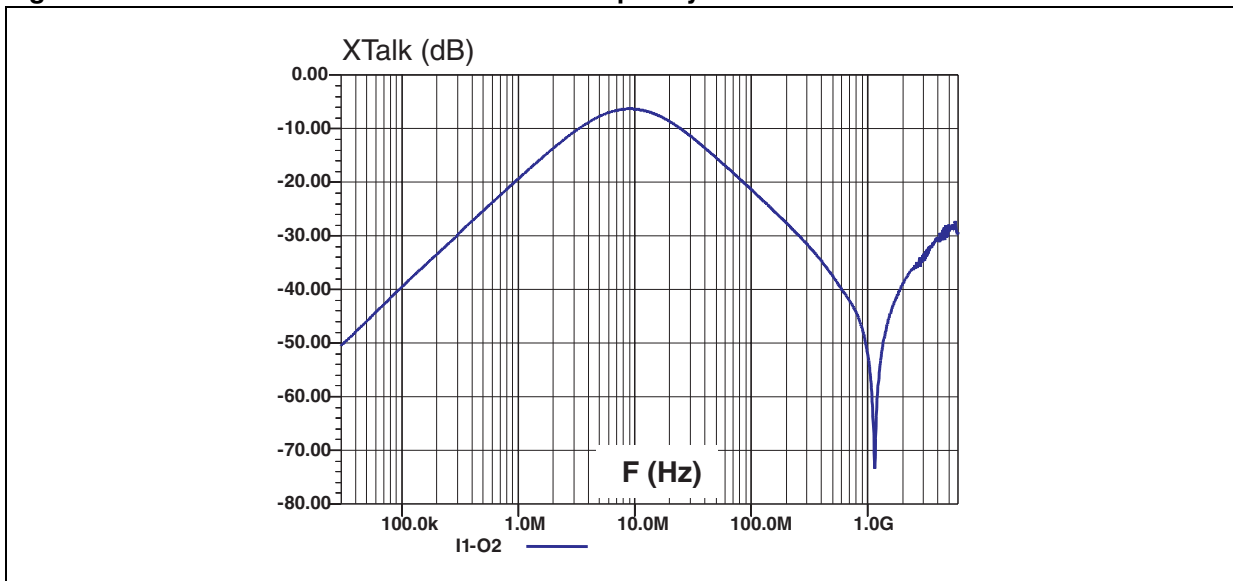


Figure 6. ESD test conditions

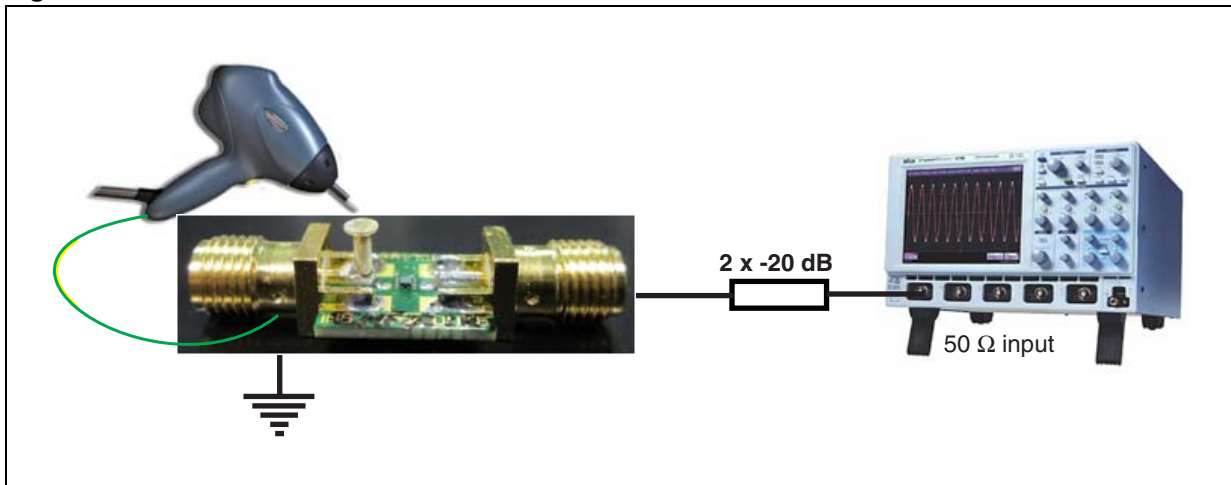
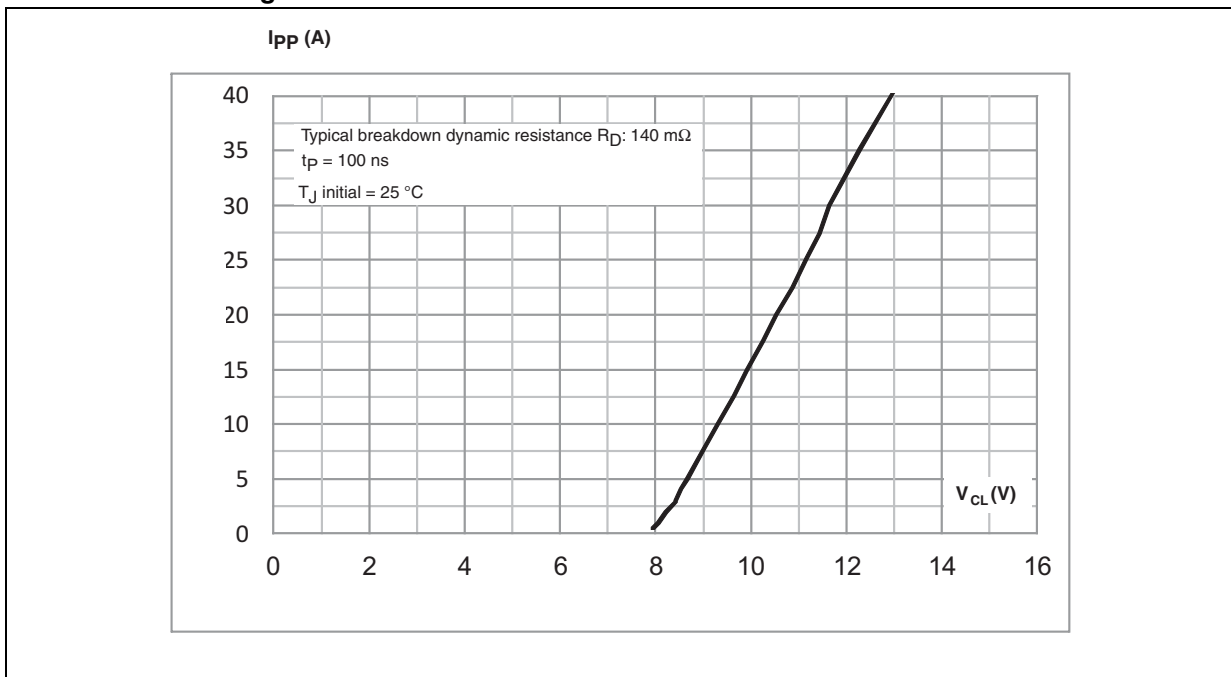


Figure 7. Clamping voltage V_{CL} versus peak pulse current I_{PP} for short pulse duration such as ESD surges



Note: For further information on the dynamic characteristic see the STMicroelectronics' application note AN4022, "TVS short pulse R_D measurement and correlation with TVS clamping voltage during ESD".

Figure 8. Output filter ESD response to IEC 61000-4-2 (+8 kV contact discharge) I1 to O1

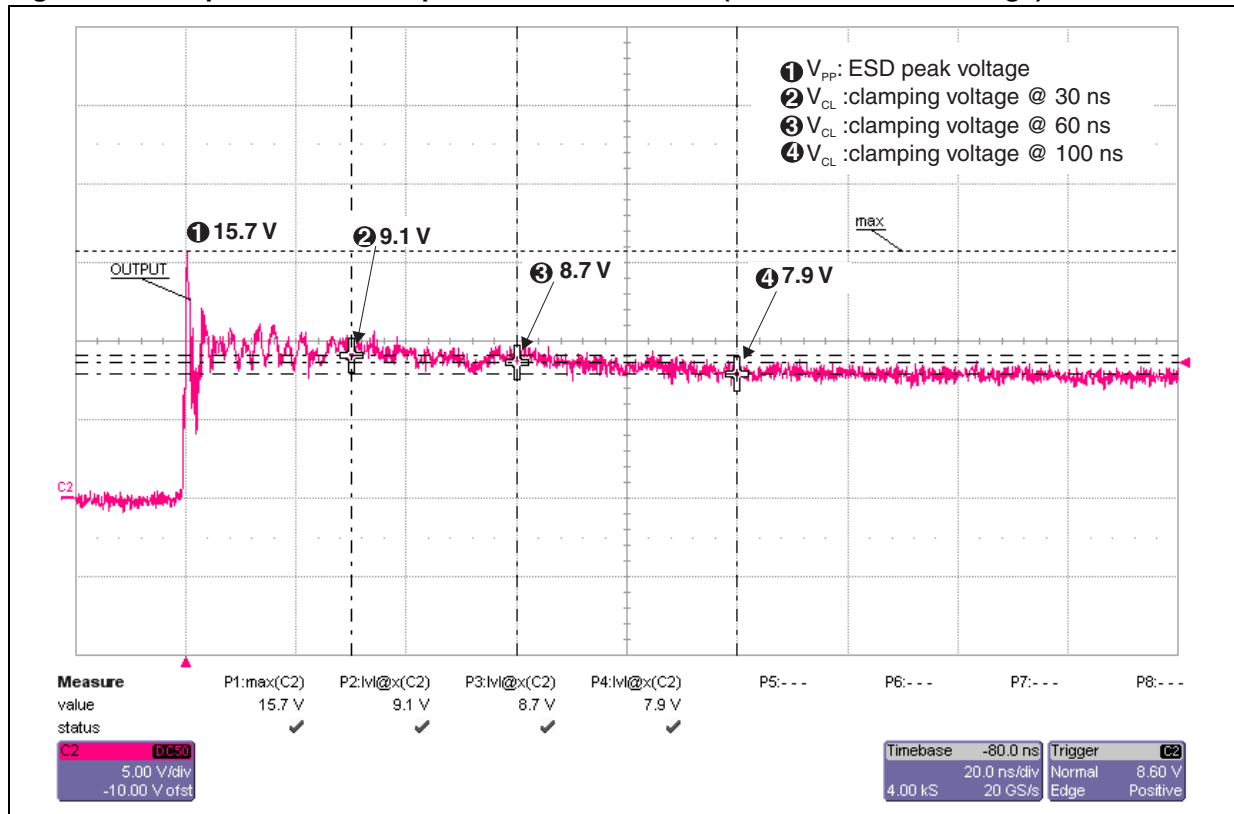


Figure 9. Output filter ESD response to IEC 61000-4-2 (-8 kV contact discharge) I1 to O1

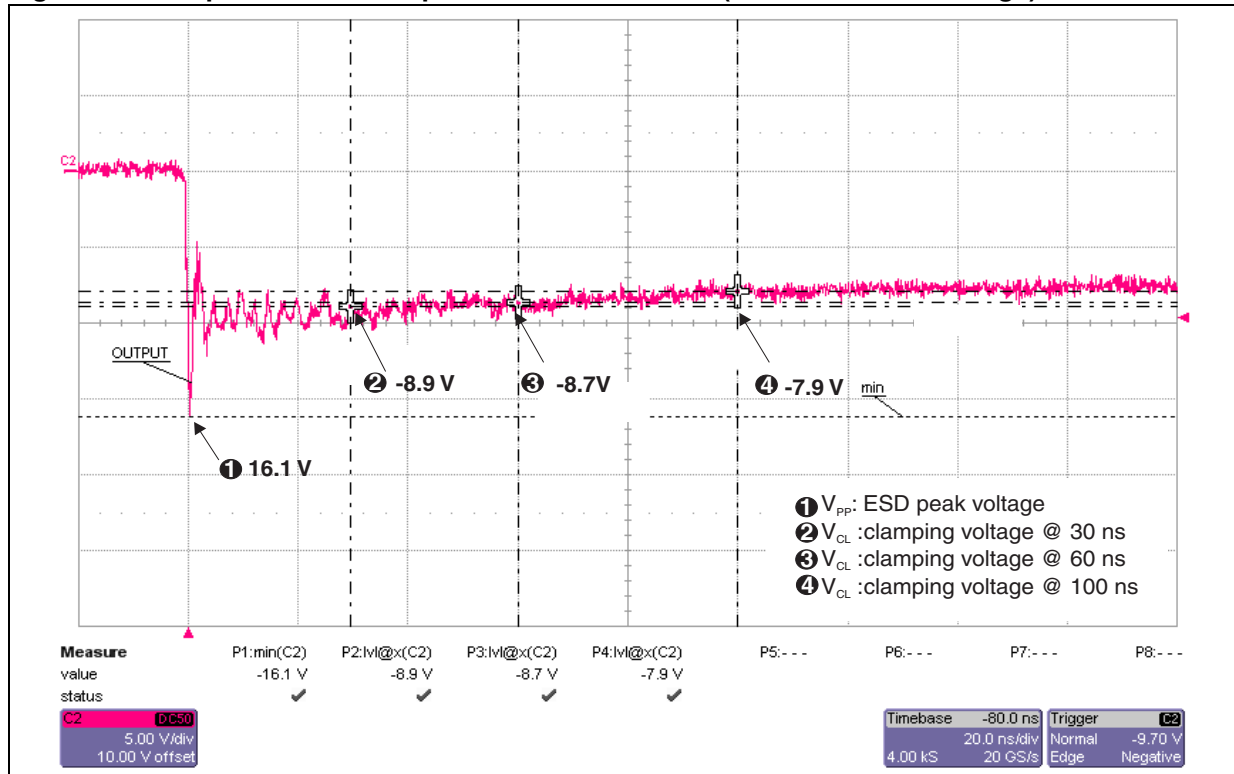


Figure 10. Output filter ESD response to IEC 61000-4-2 (+15 kV contact discharge) I1 to O1

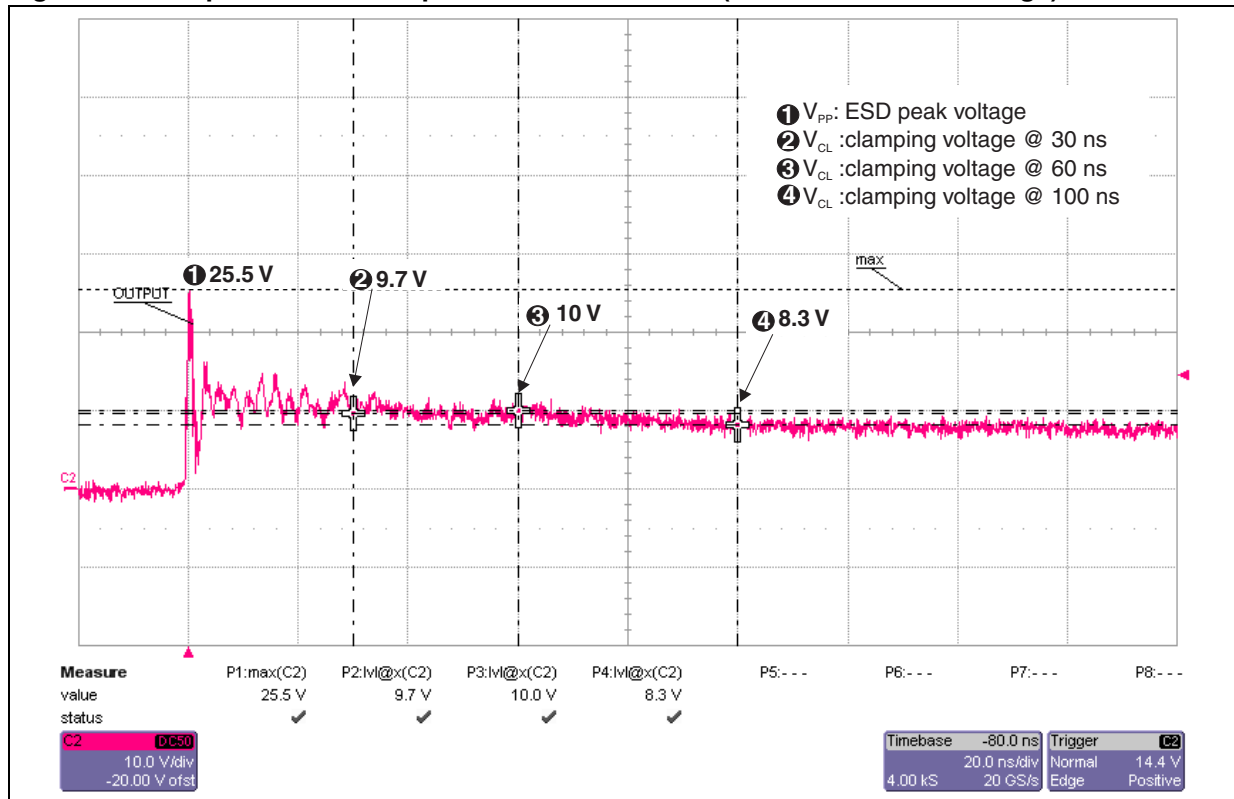


Figure 11. Output filter ESD response to IEC 61000-4-2 (-15 kV contact discharge) I1 to O1

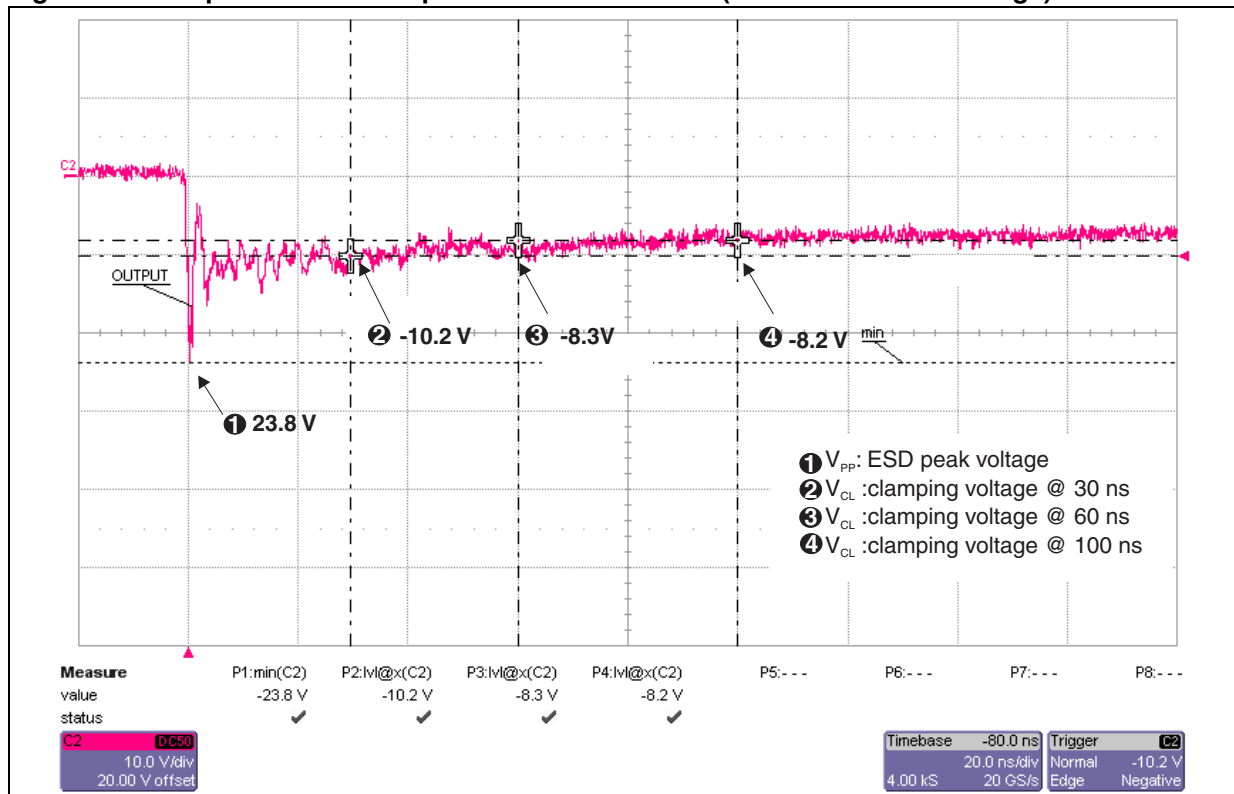


Figure 12. Output filter ESD response to IEC 61000-4-2 (+30 kV contact discharge) I1 to O1

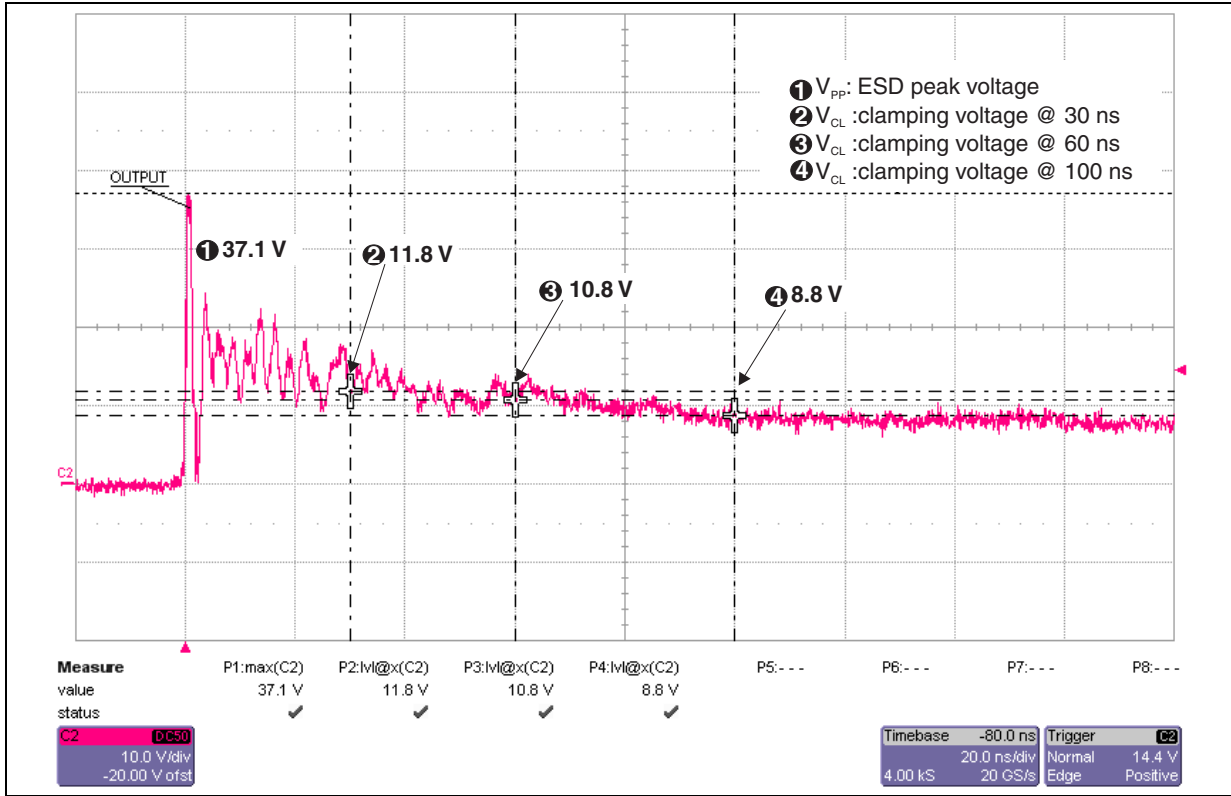
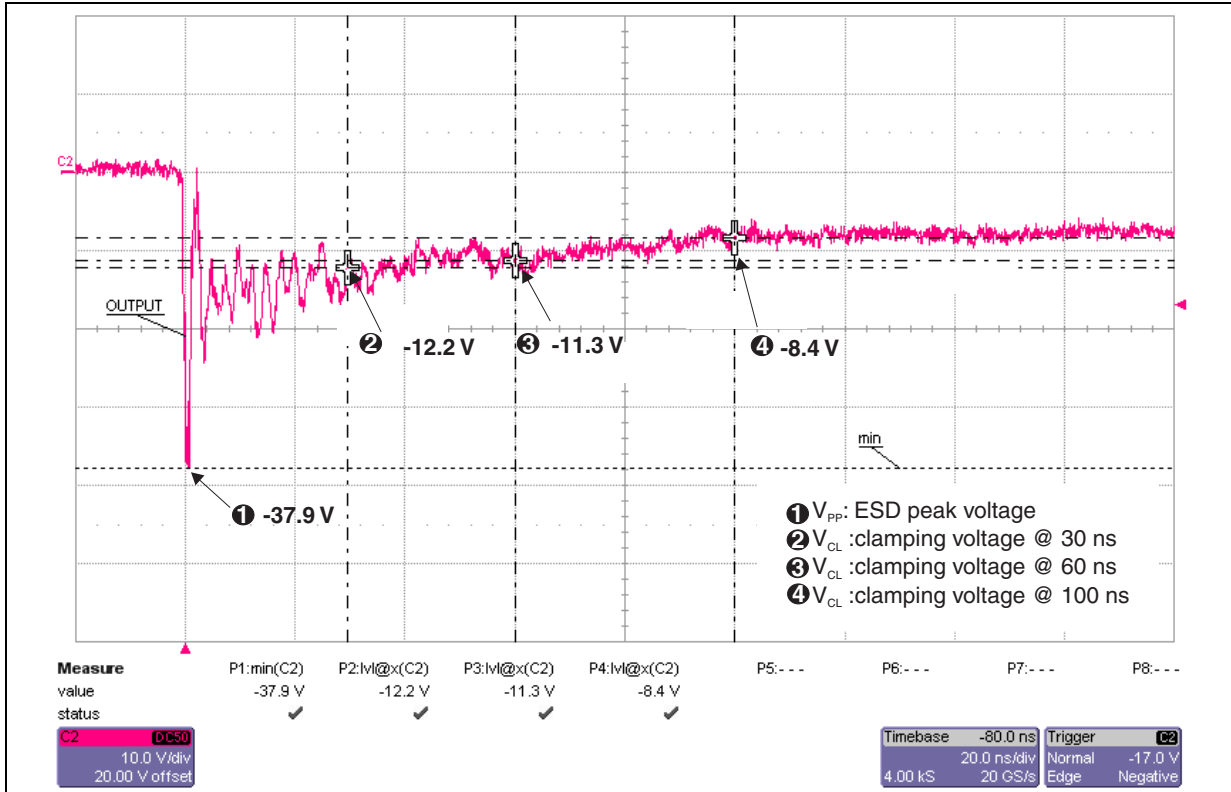
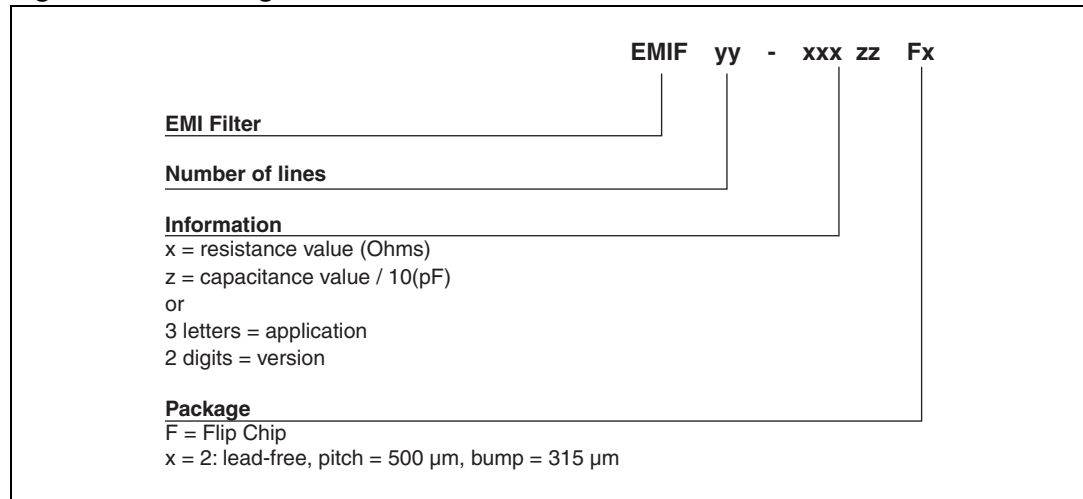


Figure 13. Output filter ESD response to IEC 61000-4-2 (-30 kV contact discharge) I1 to O1



2 Ordering information scheme

Figure 14. Ordering information scheme



3 Package information

In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK® packages, depending on their level of environmental compliance. ECOPACK® specifications, grade definitions and product status are available at: www.st.com. ECOPACK® is an ST trademark.

Figure 15. Package dimensions

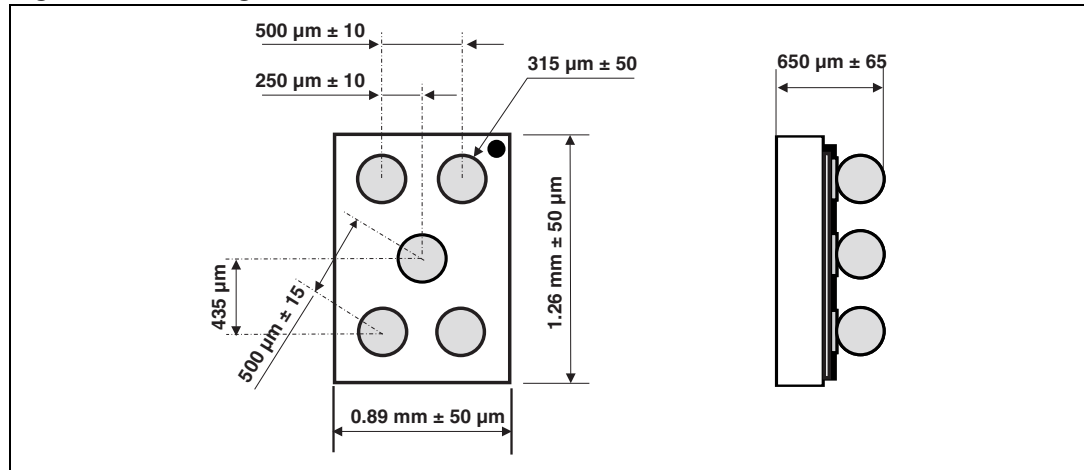


Figure 16. Footprint

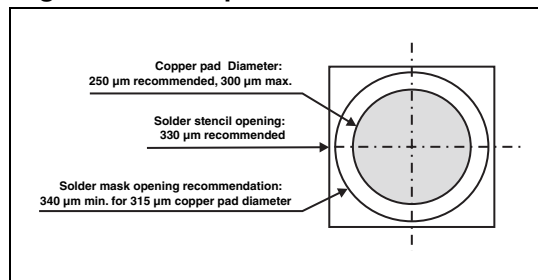


Figure 17. Marking

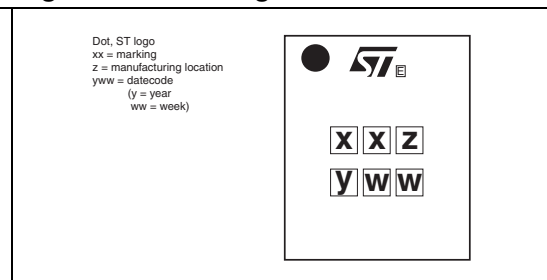
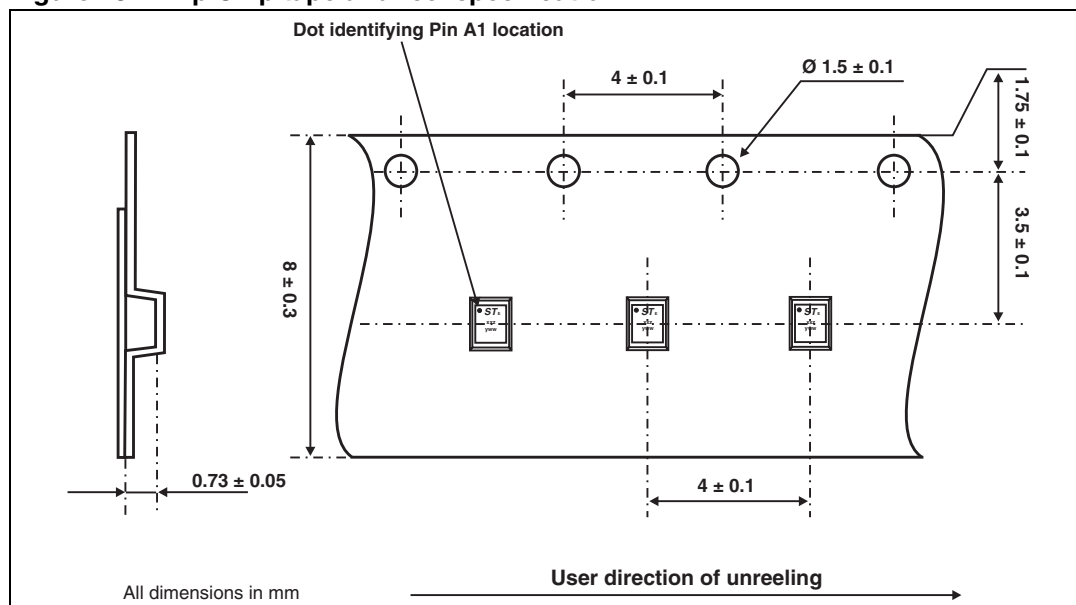


Figure 18. Flip Chip tape and reel specification



Note:

More information is available in the application notes:

AN1235: "Flip Chip: Package description and recommendations for use"

AN1751: "EMI filters: Recommendations and measurements"

4 Ordering information

Table 3. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
EMIF02-SPK02F2	JD	Flip Chip	1.8 mg	5000	Tape and reel 7"

5 Revision history

Table 4. Document revision history

Date	Revision	Changes
17-Sep-2008	1	Initial release.
12-Sep-2011	2	Updated Figure 15 and Figure 16 .
3-Apr-2012	3	Updated cover page features and description. Inserted Figure 6 to Figure 13 .

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