

1 Electrical characteristics

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

Symbol	Parameter	Value	Unit
V_{PP}	Internal pins (A3, B3, C3):		
	ESD discharge IEC 61000-4-2, level 1, air discharge	2	kV
	ESD discharge IEC 61000-4-2, level 1, contact discharge	2	
	External pins (A2, B1, C1, C2):		
	ESD discharge IEC 61000-4-2, level 4, air discharge	15	
	ESD discharge IEC 61000-4-2, level 4, contact discharge	8	
P_d	Line resistance power dissipation at 70 °C	60	mW
T_{op}	Operating temperature range	- 40 to + 85	°C
T_{stg}	Storage temperature range	- 55 to 150	°C

Figure 3. Electrical characteristics - definitions

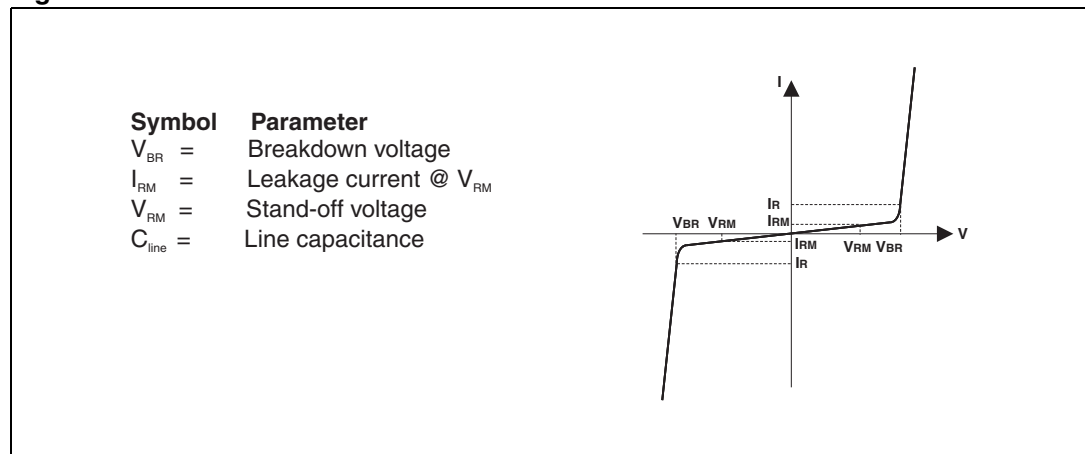


Table 2. Electrical characteristics - values ($T_{amb} = 25\text{ °C}$)

Symbol	Test conditions	Min.	Typ.	Max.	Unit
V_{BR}	$I_R = 1\text{ mA}$	14			V
I_{RM}	$V_{RM} = 3\text{ V per line}$		50	200	nA
R_1, R_3	Tolerance $\pm 20\%$	80	100	120	Ω
R_2	Tolerance $\pm 20\%$	37.6	47	56.4	Ω
C_{line}	$V_{line} = 0\text{ V}$, $V_{osc} = 30\text{ mV}$, $F = 1\text{ MHz}$ (measured under zero light conditions)	8	10	12	pF

Figure 4. Attenuation measurement A2 - A3

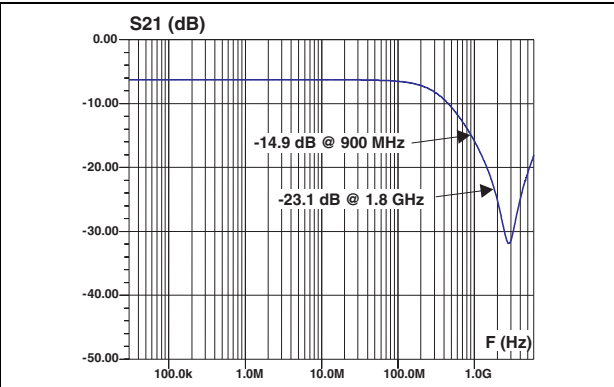


Figure 5. Attenuation measurement B1 - B3

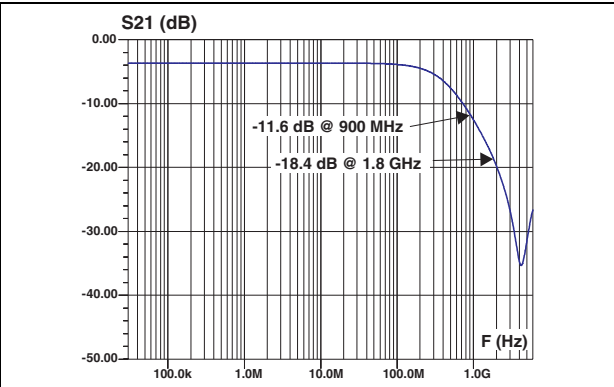


Figure 6. Attenuation measurement C1 - C3

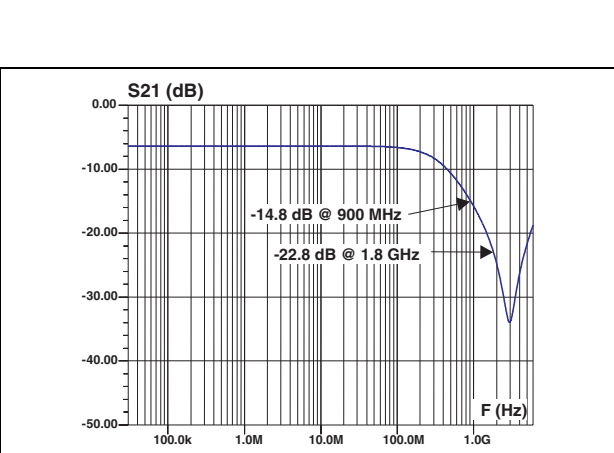


Figure 7. Analog crosstalk measurement A2 - B3
(30 kHz < F < 6 GHz > 11.8 dB)

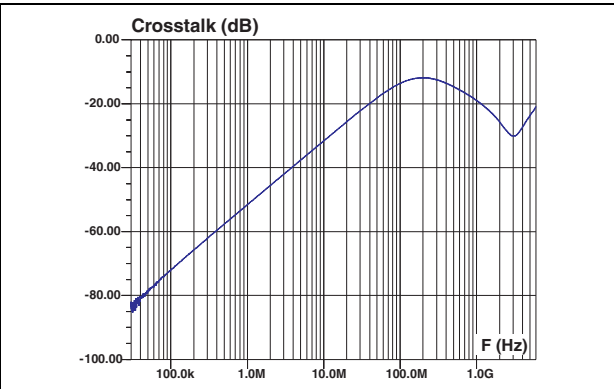


Figure 8. Analog crosstalk measurement A2 - C3 (30 kHz < F < 6 GHz > 13.8 dB)

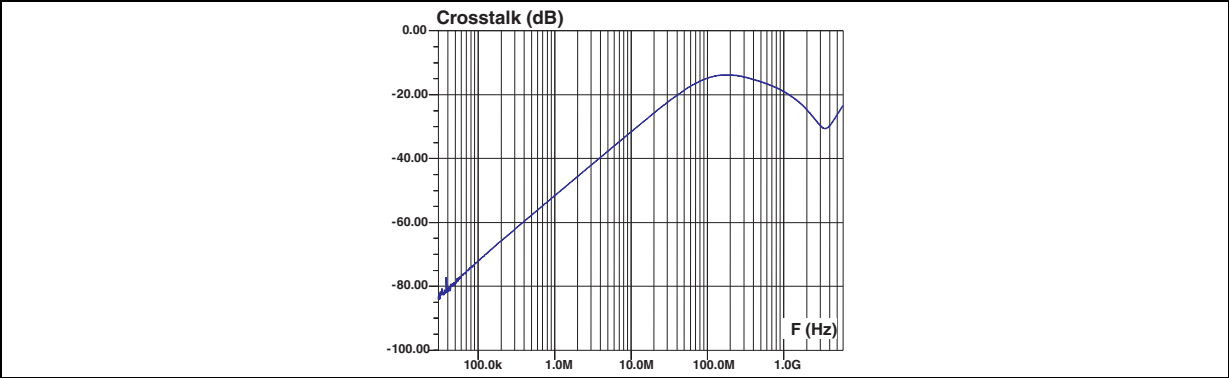


Figure 9. Digital crosstalk measurements

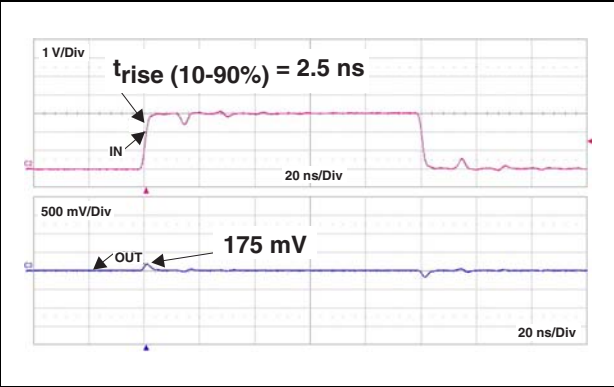


Figure 10. ESD response to IEC 61000-4-2 (+15 kV air discharge) on one line

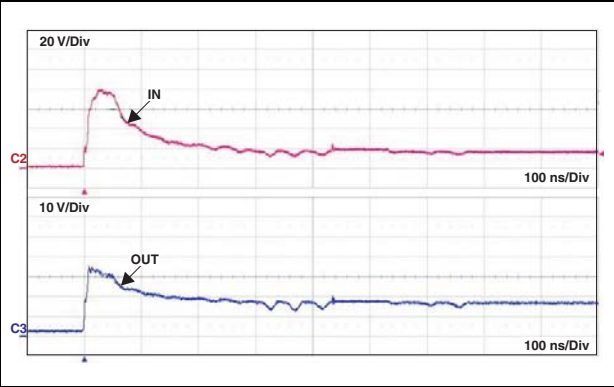


Figure 11. ESD response to IEC 61000-4-2 (-15 kV air discharge) on one line

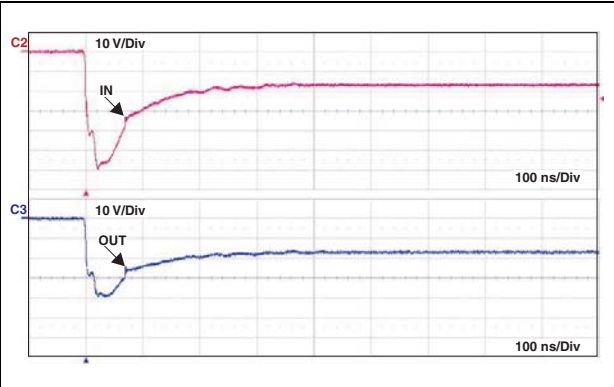
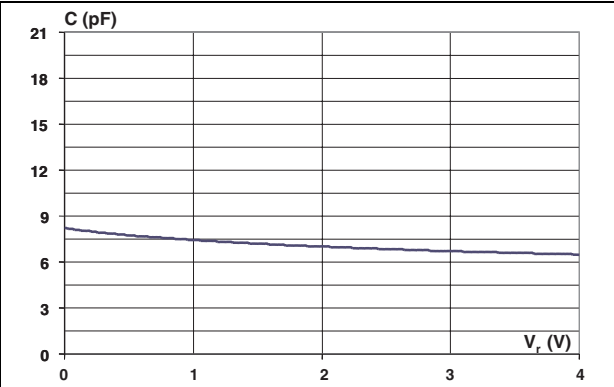
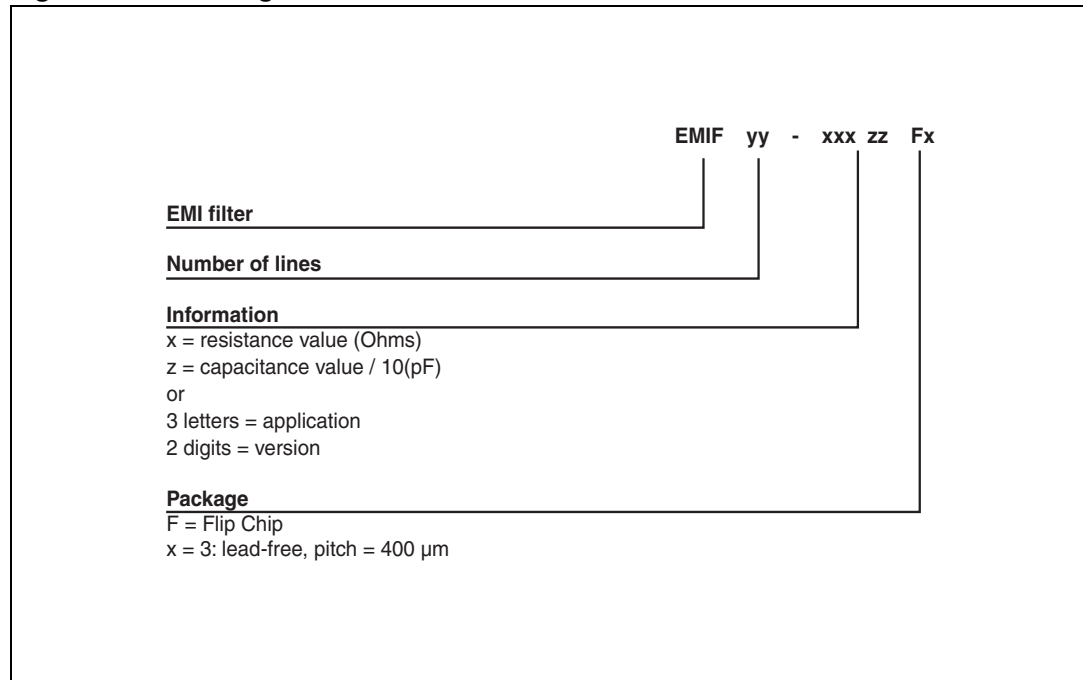


Figure 12. Line capacitance versus applied voltage



2 Ordering information scheme

Figure 13. 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 14. Package dimensions

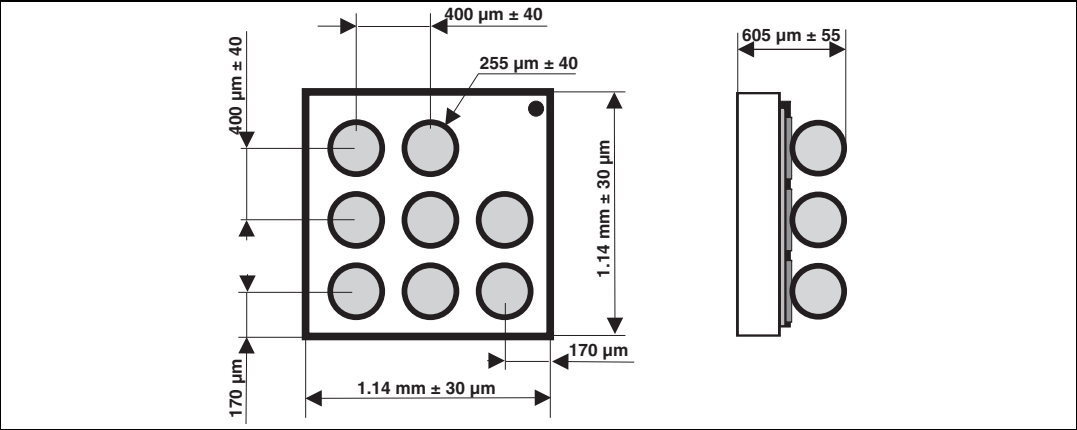


Figure 15. Footprint

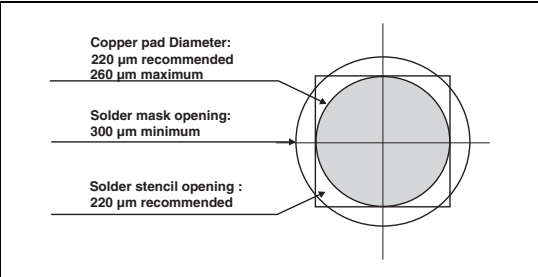


Figure 16. Marking

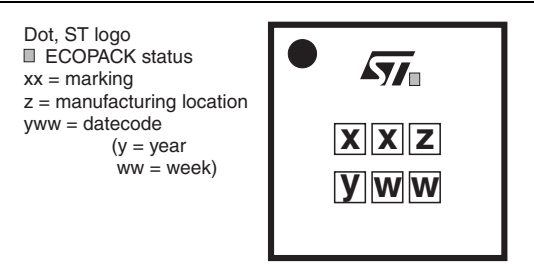
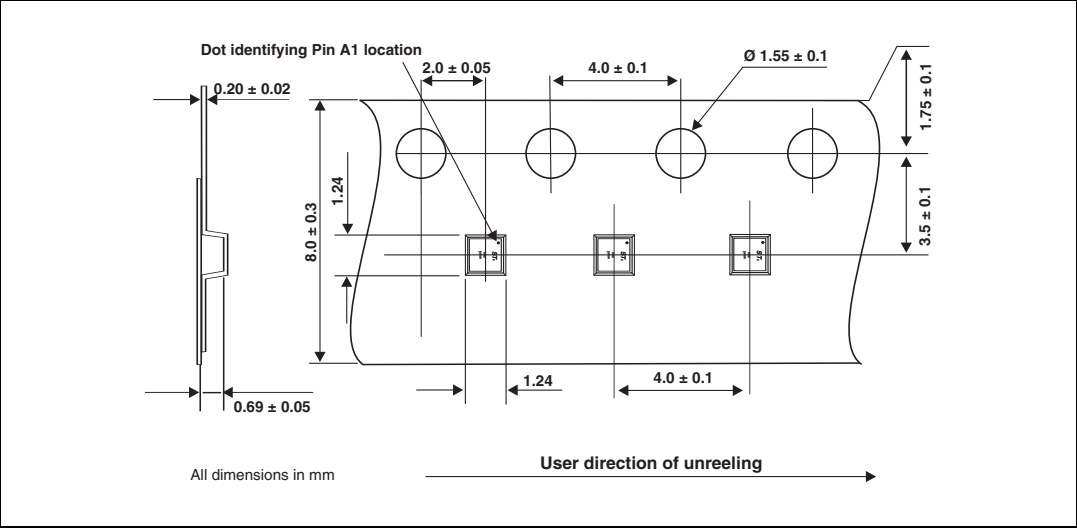


Figure 17. Flip-Chip tape and reel specification



4 Ordering information

Table 3. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
EMIF03-SIM03F3	JH	Flip Chip	1.8 mg	5000	Tape and reel 7"

Note:

More information is available in the application notes:

AN2348: "STMicroelectronics 400 micro-metre Flip Chip: package description and recommendation for use"

AN1751: "EMI filters: recommendations and measurements"

5 Revision history

Table 4. Document revision history

Date	Revision	Changes
03-May-2010	1	Initial release.
12-Oct-2010	2	Updated Figure 2 and value I_{RM} in Table 2 .

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