

1 Electrical characteristics

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

Symbol	Parameter	Value	Unit
T_j	junction temperature	125	$^{\circ}\text{C}$
T_{op}	Operating temperature range	-40 to +85	$^{\circ}\text{C}$
T_{stg}	Storage temperature range	-55 to 150	$^{\circ}\text{C}$

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

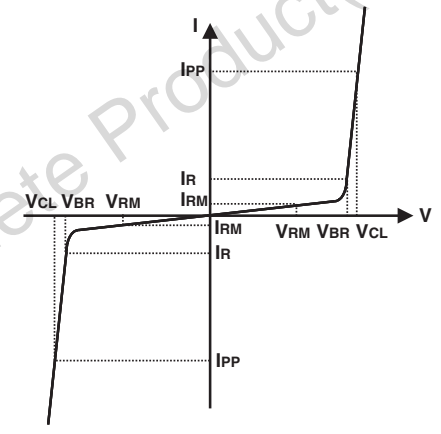
Symbol	Parameters				
V_{BR}	Breakdown voltage				
I_{RM}	Leakage current @ V_{RM}				
V_{RM}	Stand-off voltage				
V_{CL}	Clamping voltage				
R_d	Dynamic impedance				
I_{PP}	Peak pulse current				
$R_{I/O}$	Series resistance between input and output				
C_{line}	Input capacitance per line				
Symbol	Test conditions	Min.	Typ.	Max.	Unit
V_{BR}	$I_R = 1\text{ mA}$	14	16		V
I_{RM}	$V_{RM} = 12\text{ V per line}$			500	nA
$R_{I/O}$		423	470	517	Ω
C_{line}	@ 0 V		16	20	pF

Figure 3. Attenuation measurement and Aplac simulation

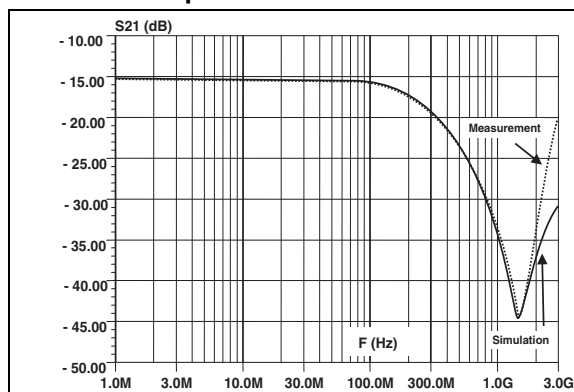


Figure 4. Analog crosstalk measurements

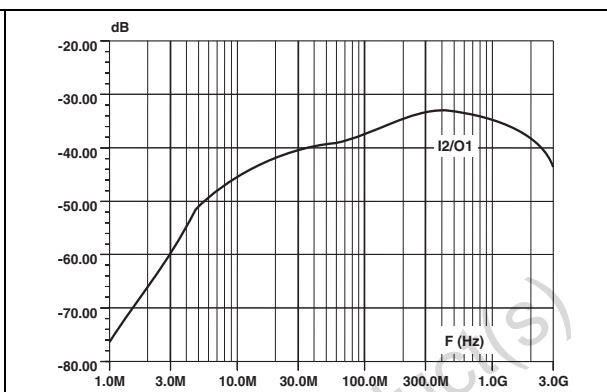


Figure 5. Digital crosstalk measurement

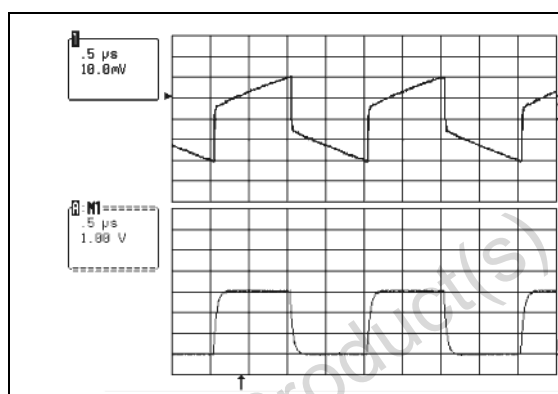


Figure 6. ESD response to IEC61000-4-2 (-15 kV air discharge) on one input V(in) and on one output V(out)

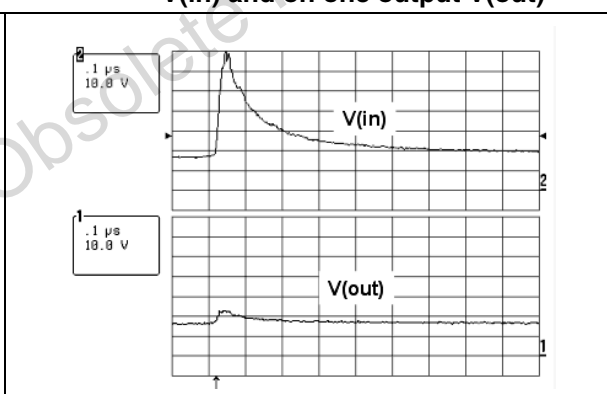


Figure 7. ESD response to IEC61000-4-2 (+15 kV air discharge) on one input V(in) and on one output V(out)

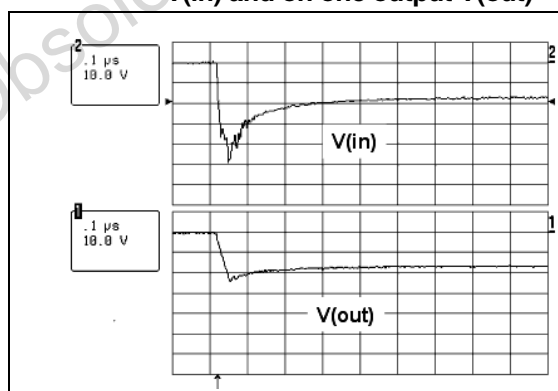
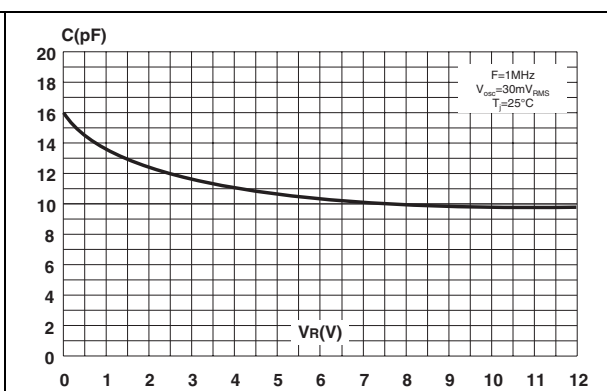


Figure 8. Line capacitance versus applied voltage



2 Application information

Figure 9. Aplac model

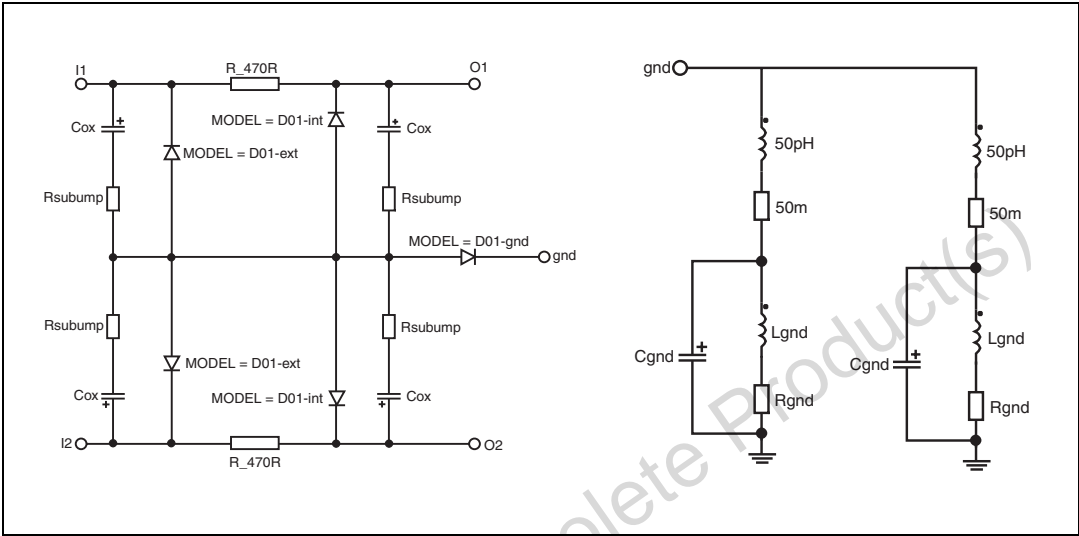
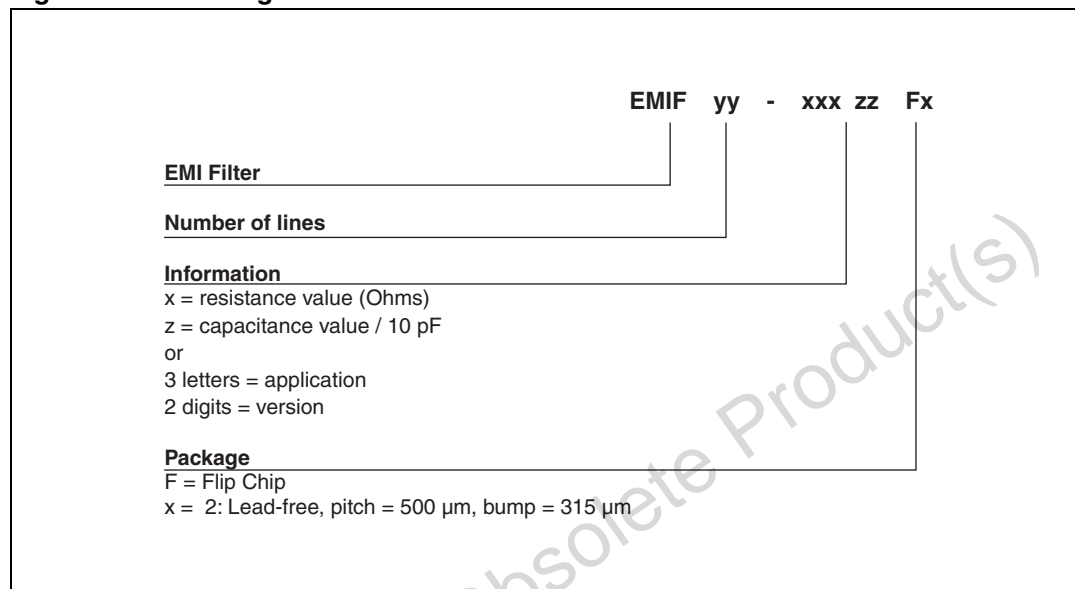


Figure 10. Aplac parameters

Model D01-ext	Model D01-int	Model D01-gnd	Ls 400pH
BV = 7	BV = 7	BV = 7	Rs 100m
CJO = Cz_ext	CJO = Cz_int	CJO = Cz_gnd	
IBV = 1u	IBV = 1u	IBV = 1u	R_470R 482.6
IKF = 1000	IKF = 1000	IKF = 1000	Cz_ext 8.73pF
IS = 10f	IS = 10f	IS = 10f	Rs_ext 850m
ISR = 100p	ISR = 100p	ISR = 100p	Cz_int 2.9pF
N = 1	N = 1	N = 1	Rs_int 850m
M = 0.3333	M = 0.3333	M = 0.3333	Cz_gnd 215.61pF
RS = Rs_ext	RS = Rs_int	RS = Rs_gnd	Rs_gnd 470m
VJ = 0.6	VJ = 0.6	VJ = 0.6	
TT = 50n	TT = 50n	TT = 50n	Rgnd 10m
			Lgnd 48pH
			Cgnd 0.15pF
			Cox 3.05pF
			Rsubump 200m

3 Ordering information scheme

Figure 11. Ordering information scheme



4 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 12. Package dimensions

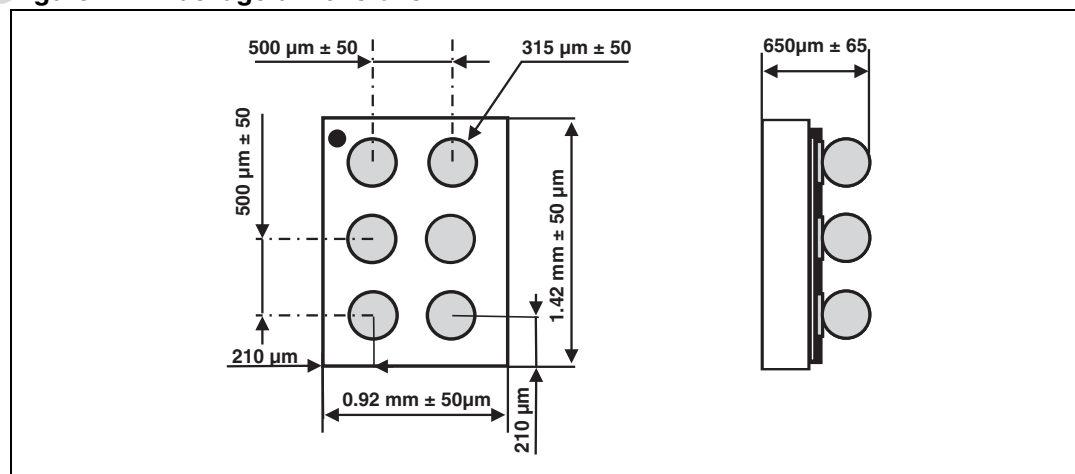


Figure 13. Footprint

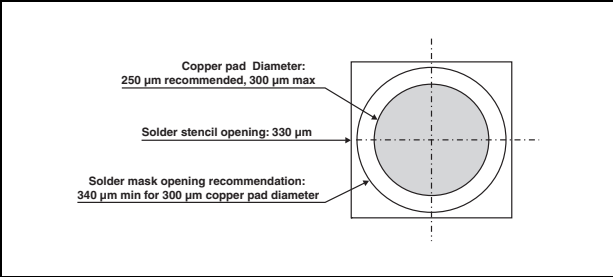


Figure 14. Marking

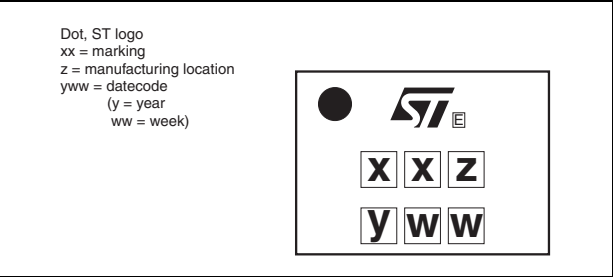
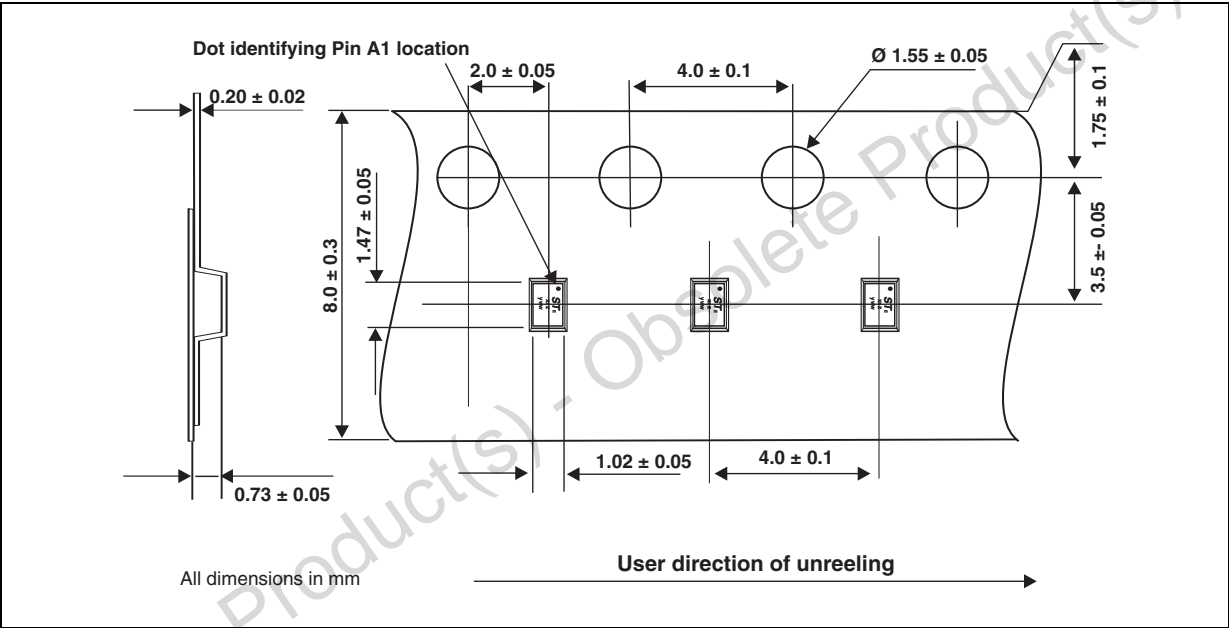


Figure 15. Flip Chip tape and reel specification



5 Ordering information

Table 3. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
EMIF02-MIC02F2	FJ	Flip Chip	2.3 mg	5000	Tape and reel 7"

Note: More information is available in the application notes:
AN1235: "Flip Chip: Package description and recommendations for use"
AN1751: "EMI filters: Recommendations and measurements"

6 Revision history

Table 4. Document revision history

Date	Revision	Changes
12-Oct-2004	1	Initial release.
11-Jan-2006	2	ECOPACK statement added. Die dimensions modified in Figure 12 . and first page. Typographical errors corrected.
17-Apr-2008	3	Updated ECOPACK statement. Updated Figure 11 , Figure 12 and Figure 15 . Reformatted to current standards.
26-May-2011	4	Updated C _{line} values in Table 2 .

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