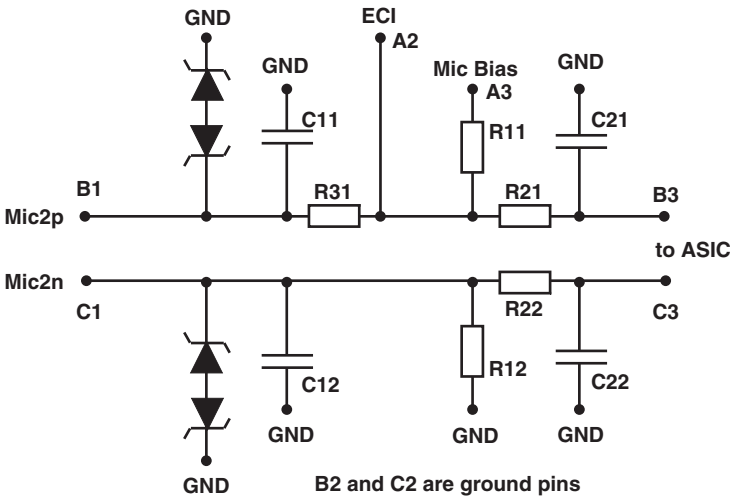
1 Characteristics

Figure 2. Configuration



ECI pin connection

The ECI pin (enhancement control interface) is an input pin for the audio pre-amplifier chip which detects the voltage of the microphone line MIC2P in case the user presses the on-hook/off-hook button on the headset. When the user selects off-hook using the headset button, the MIC2P is shorted to MIC2N which is grounded. If your design does not support the ECI feature, the ECI pin must be left open (not connected).

Table 1. Absolute ratings (limiting values)

Symbol	Parameter and test conditions	Value	Unit
V_{PP}	**Pins B1 and C1:** ESD discharge IEC 61000-4-2, level 4 air discharge contact discharge **Pins A2, A3, B2, B3, C2, C3:** ESD discharge IEC 61000-4-2, level 1 air discharge contact discharge	 15 8 2 2	kV
P_D	Power dissipation at T_{amb} = 25 °C	60	mW
T_j	Maximum junction temperature	125	°C
T_{op}	Operating temperature range	- 40 to + 85	°C
T_{stg}	Storage temperature range	- 55 to + 150	°C

Figure 3. Electrical characteristics (definitions)

Symbol	Parameter
V_{BR} =	Breakdown voltage
I_{RM} =	Leakage current @ V_{RM}
$R_{I/O}$ =	Series resistance between input and output
C_{line} =	Line capacitance

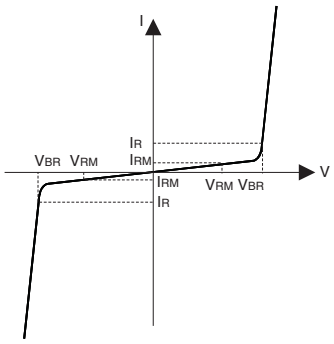


Table 2. Electrical characteristics - values (T_{amb} = 25 °C)

Symbol	Test conditions	Min.	Typ.	Max.	Unit
V_{BR}	I_R = 1 mA	14			V
I_{RM}	V_{RM} = 3 V per line			100	nA
R_{11}		1.9	2	2.1	kΩ
R_{12}		0.8	1	1.2	kΩ
R_{21}, R_{22}		1.76	2.2	2.64	kΩ
R_{31}		20	25	30	Ω
C_{11}, C_{12}	V_R = 0 V		0.8	1	nF
C_{21}, C_{22}	V_R = 0 V	1	1.25		nF

Figure 4. Attenuation simulation with 1 kΩ input and 10 kΩ output

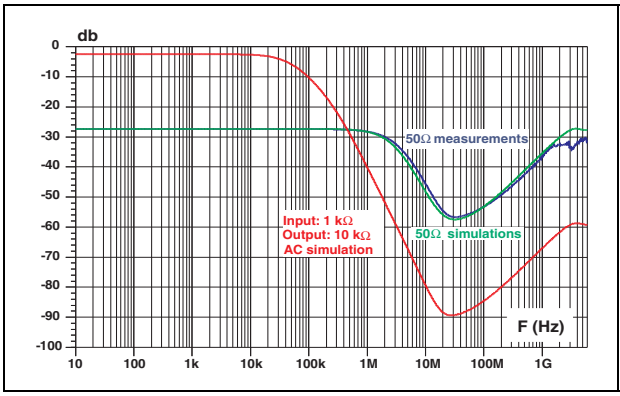


Figure 5. Analog crosstalk measurement

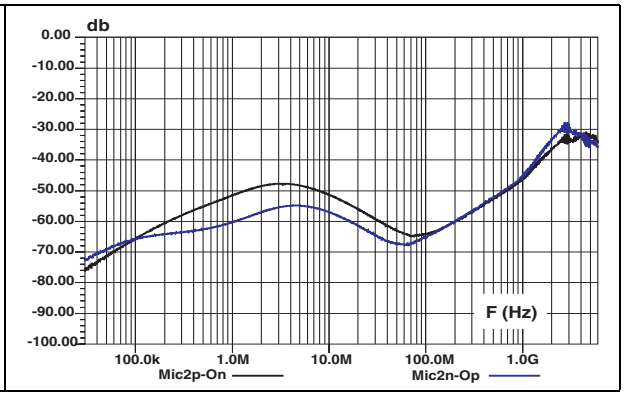


Figure 6. ESD response to IEC 61000-4-2 (+15 kV air discharge) on Mic2p

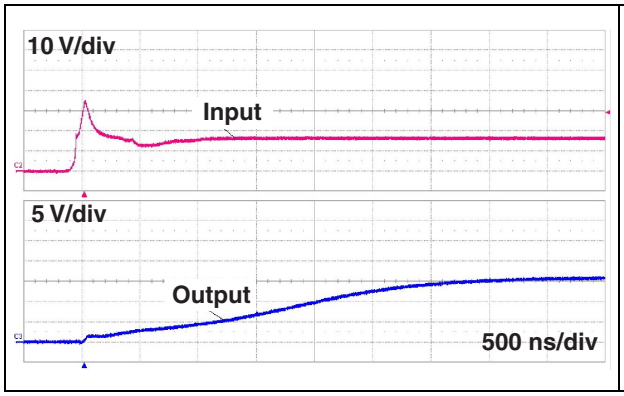


Figure 7. ESD response to IEC 61000-4-2 (-15 kV air discharge) on Mic2p

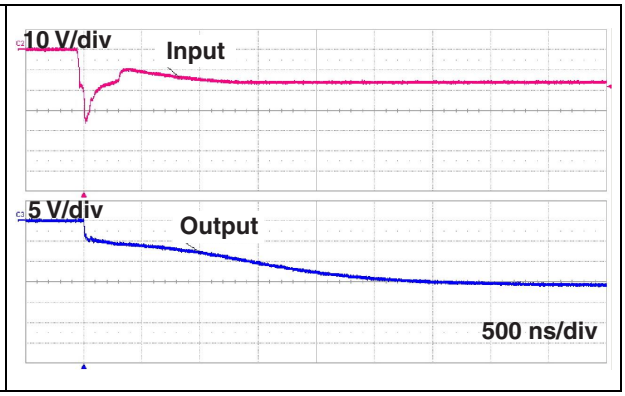


Figure 8. ESD response to IEC 61000-4-2 (+15 kV air discharge) on Mic2n

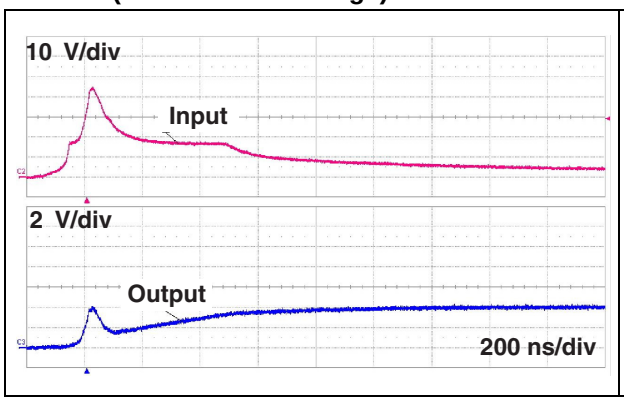


Figure 9. ESD response to IEC 61000-4-2 (-15 kV air discharge) on Mic2n

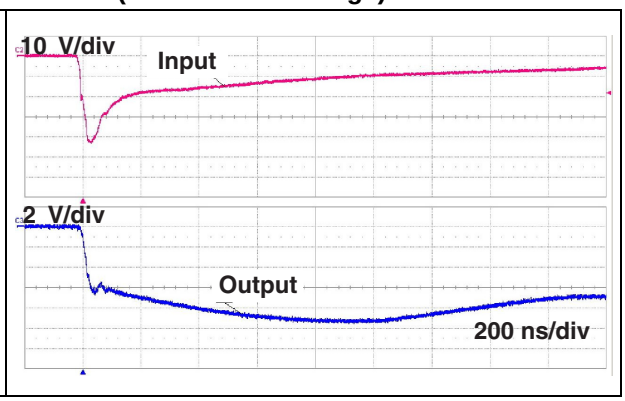
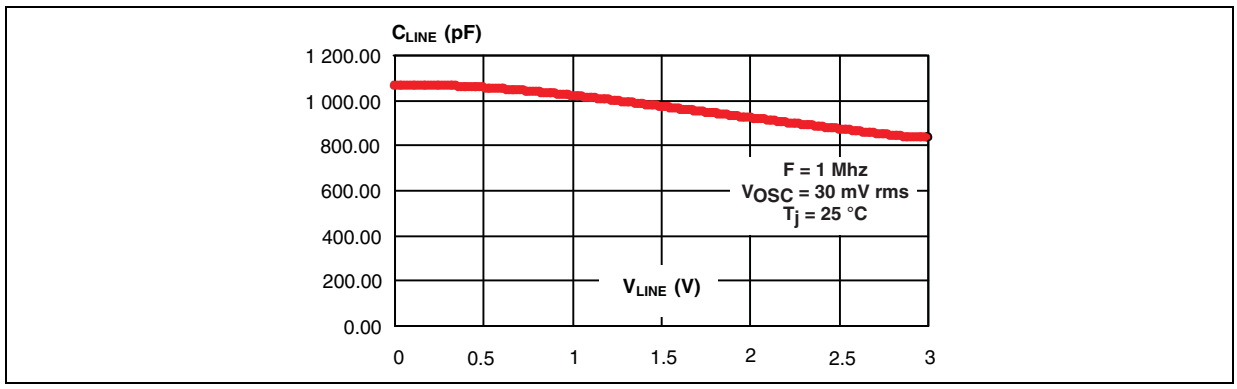


Figure 10. Line capacitance versus applied voltage



2 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 11. Flip Chip package dimensions

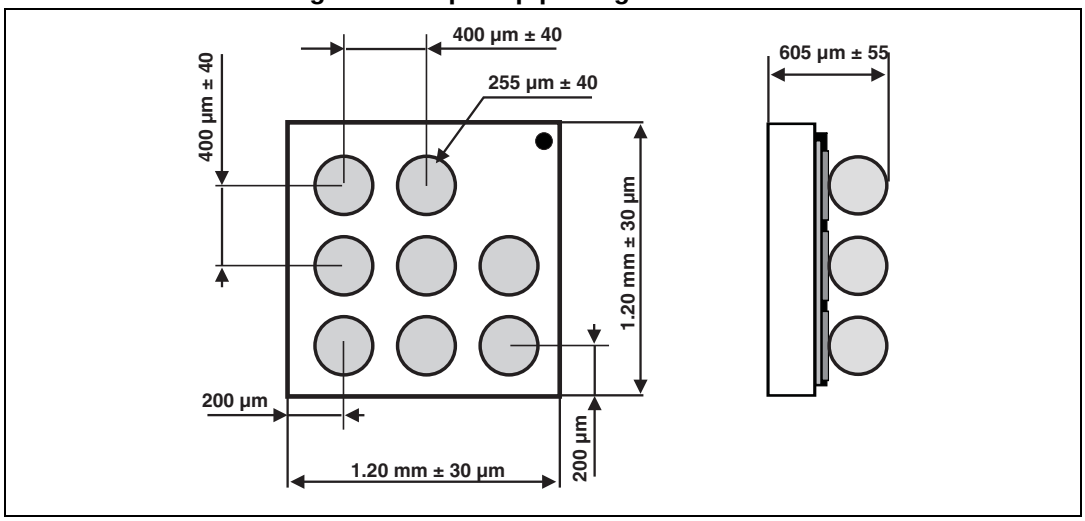


Figure 12. Footprint recommendations

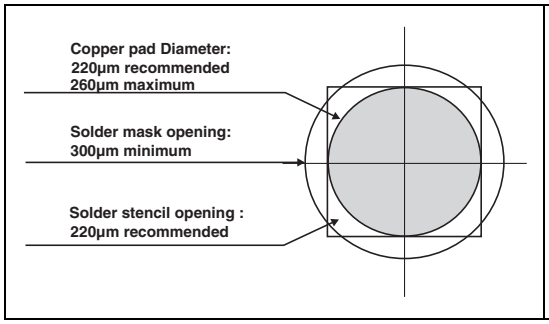


Figure 13. Marking

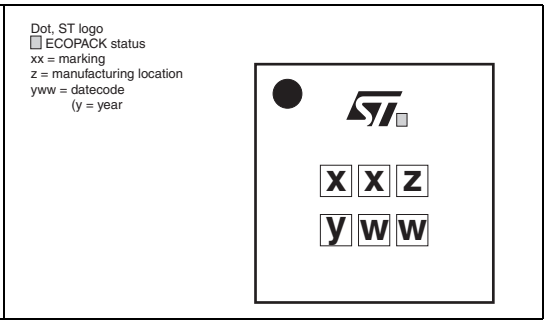
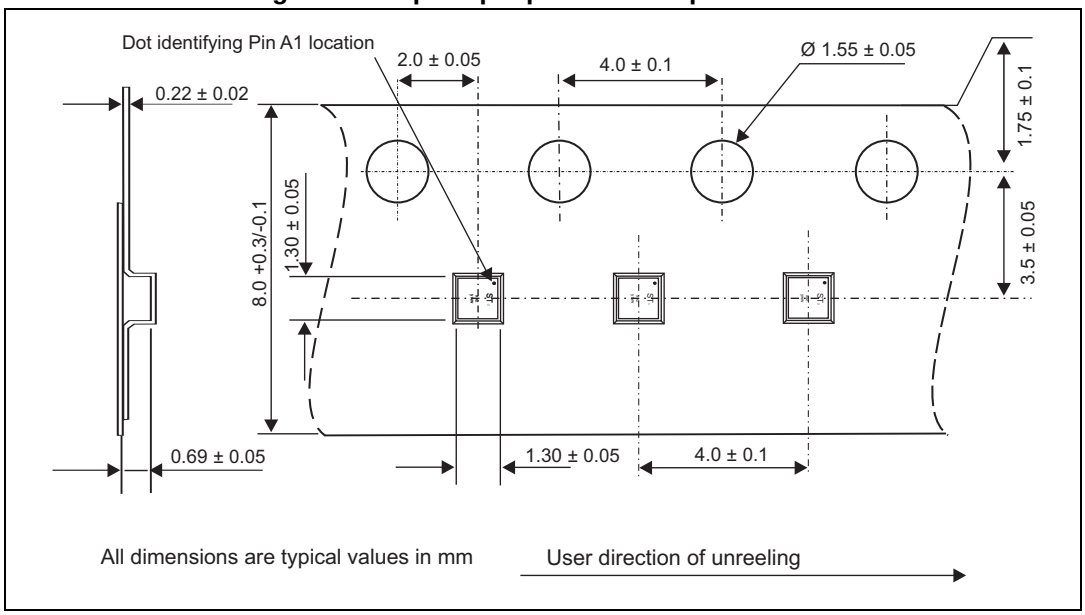


Figure 14. Flip Chip tape and reel specification



3 Ordering information

Figure 15. Ordering information scheme

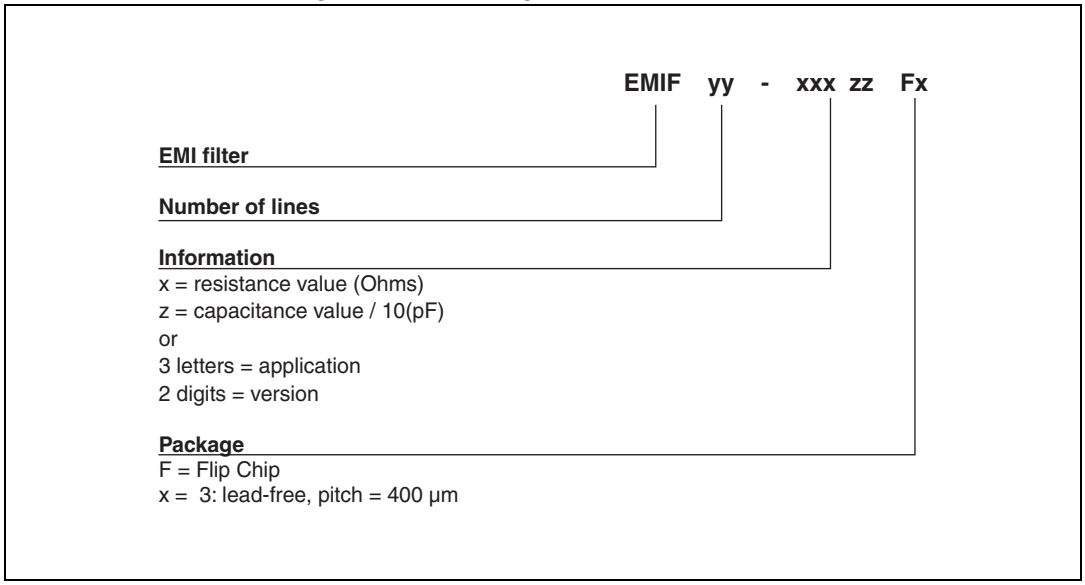


Table 3. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
EMIF02-MIC06F3	JB	Flip Chip	1.8 mg	5000	Tape and reel 7”

Note: More information is available in the application notes
AN2348: “Flip Chip: Package description and recommendations for use”
AN1751: “EMI Filters: Recommendations and measurements”

4 Revision history

Table 4. Document revision history

Date	Revision	Changes
21-Nov-2008	1	Initial release
05-Mar-2009	2	Updated *Figure 4* and *Figure 11.*
07-Apr-2010	3	Updated tolerance *Figure 11.*
23-Sep-2011	4	Added *ECI pin connection on page 2*.
26-May-2014	5	Updated *Figure 1* and *Figure 14*.

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