1 Characteristics

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

Symbol	Parameter	Test condition	Value	Unit
P_{PP}	Peak pulse power dissipation (8/20 µs pulse)	T_j initial = T_{amb}	350	W
I_{FSM}	Non repetitive surge peak forward current	t_p = 10 ms, T_j initial = T_{amb}	5	A
T_j	Maximum operating junction temperature		125	°C
T_{stg}	Storage temperature range		-55 to +150	°C

Figure 3. Electrical characteristics - definitions

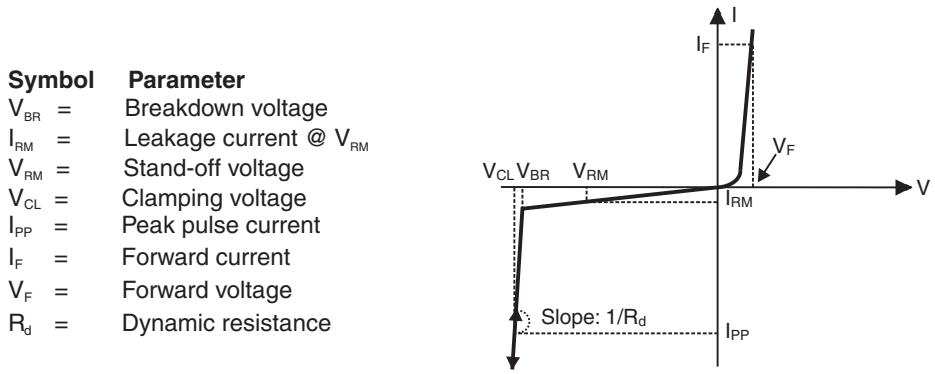


Table 2. Electrical characteristics - values (T_{amb} = 25 °C)

Symbol	Test conditions	Min.	Typ.	Max.	Unit
V_{BR}	I_R = 1 mA	16			V
I_{RM}	V_{RM} = 12 V			250	nA
V_{CL}	I_{PP} = 1 A(1)			19	V
V_F	I_F = 850 mA			1.3	V
C_{line}	V_R = 0 V, V_{OSC} = 30 mV, F = 1 MHz		175		pF

1. 8 / 20 µs pulse waveform

Figure 4. Peak pulse power versus initial junction temperature (pulse 8/20 µs)

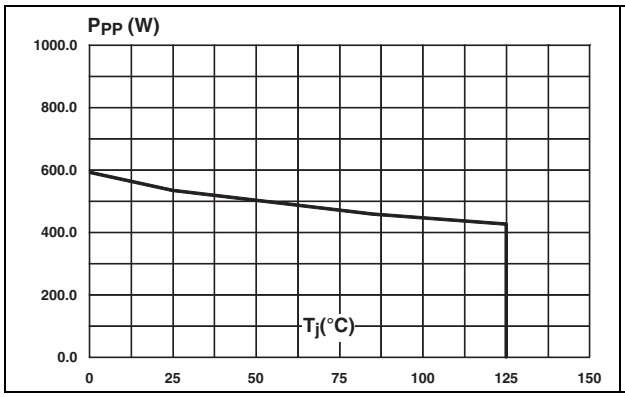


Figure 5. Peak pulse power versus initial junction temperature (pulse 10/1000 µs)

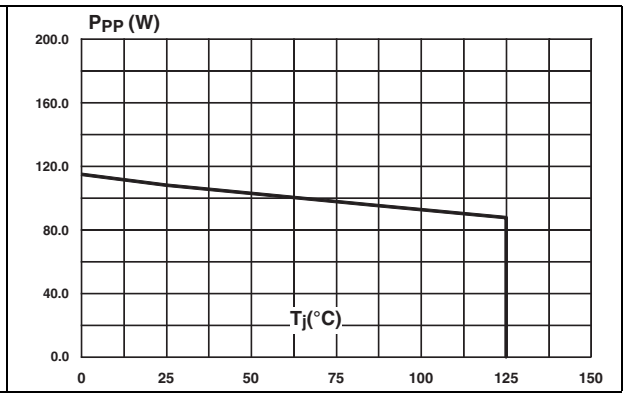


Figure 6. Peak pulse power versus exponential pulse duration

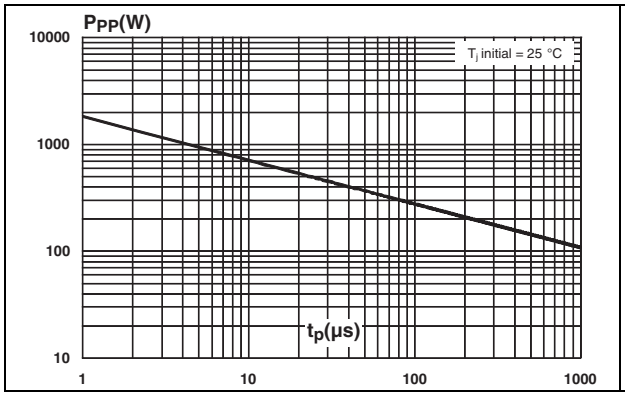


Figure 7. Clamping voltage versus peak pulse current (8/20 µs, typical values)

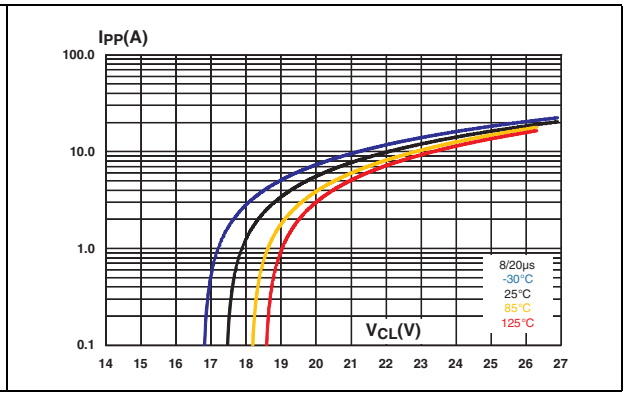


Figure 8. Leakage current versus junction temperature (typical values)

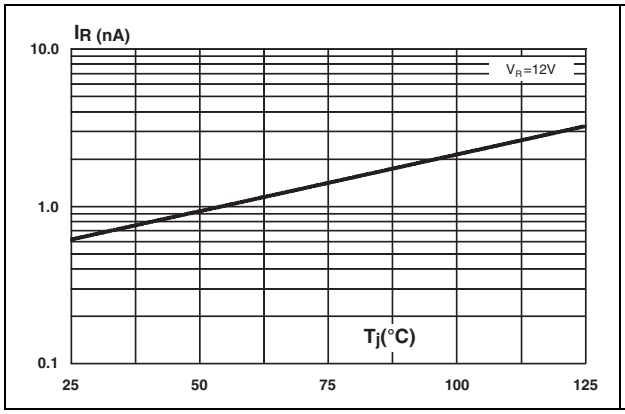


Figure 9. Forward voltage drop versus peak forward current (typical values)

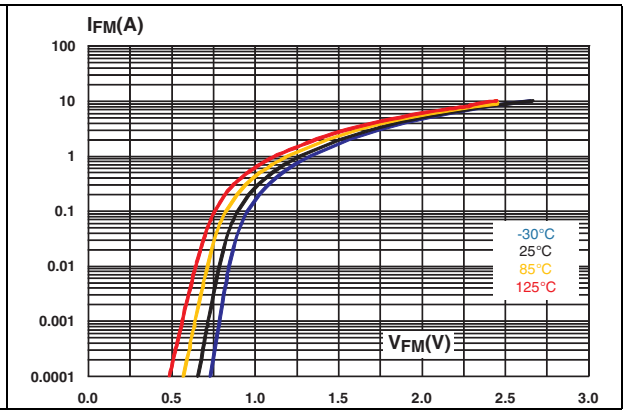


Figure 10. Junction capacitance versus line voltage (typical values)

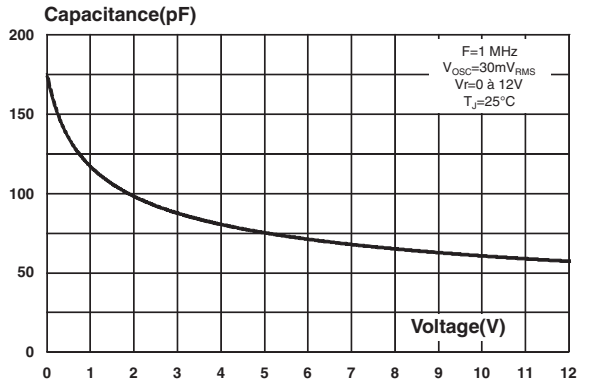


Figure 11. Junction capacitance versus frequency for different bias voltages (P = -12 dBm)

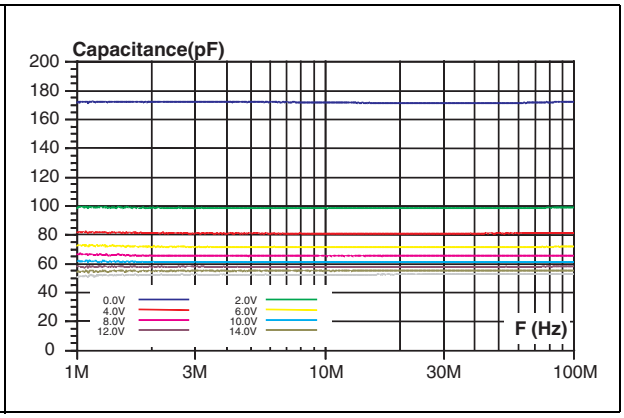


Figure 12. Breakdown voltage versus initial junction temperature (typical value)

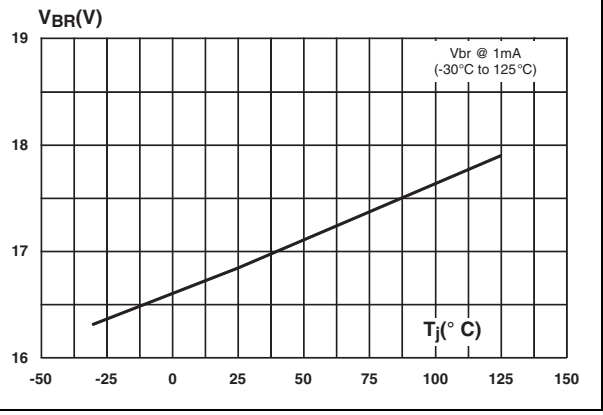


Figure 13. S21 insertion losses versus frequency response

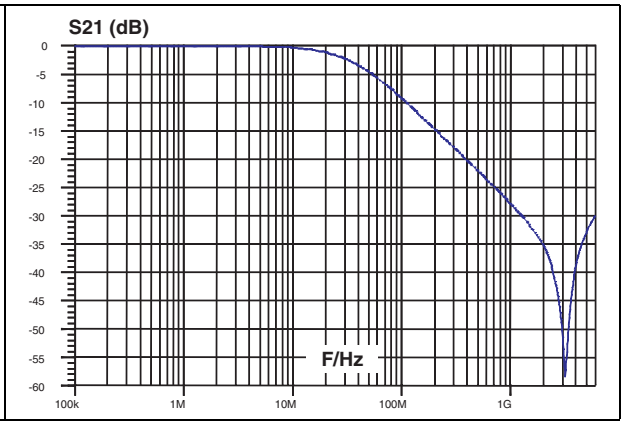


Figure 14. ESD response to IEC 61000-4-2 (+8 kV contact discharge)

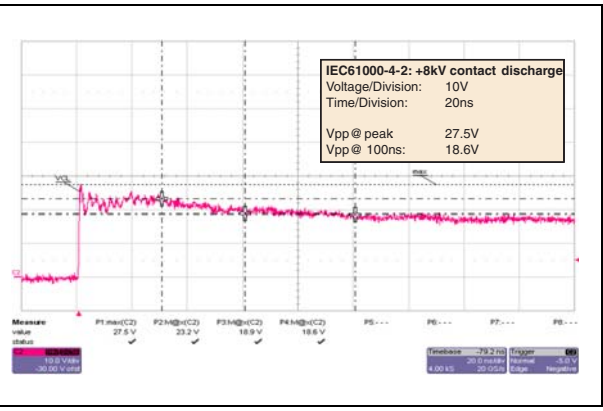
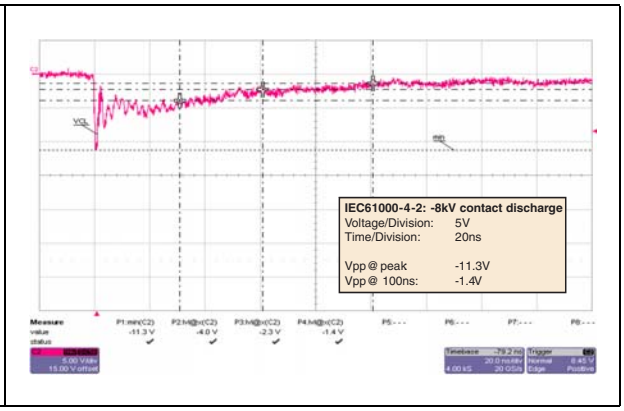
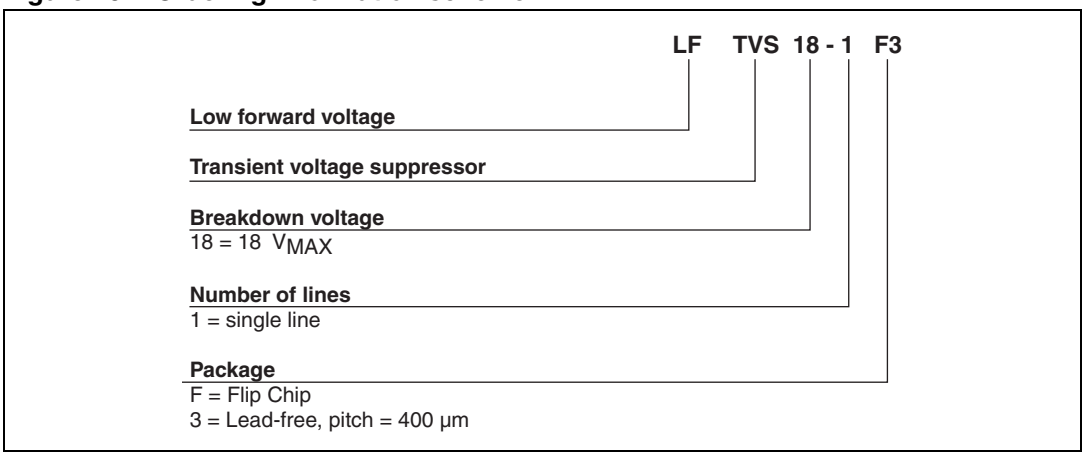


Figure 15. ESD response to IEC 61000-4-2 (-8 kV contact discharge)



2 Ordering information scheme

Figure 16. 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 17. Package dimensions

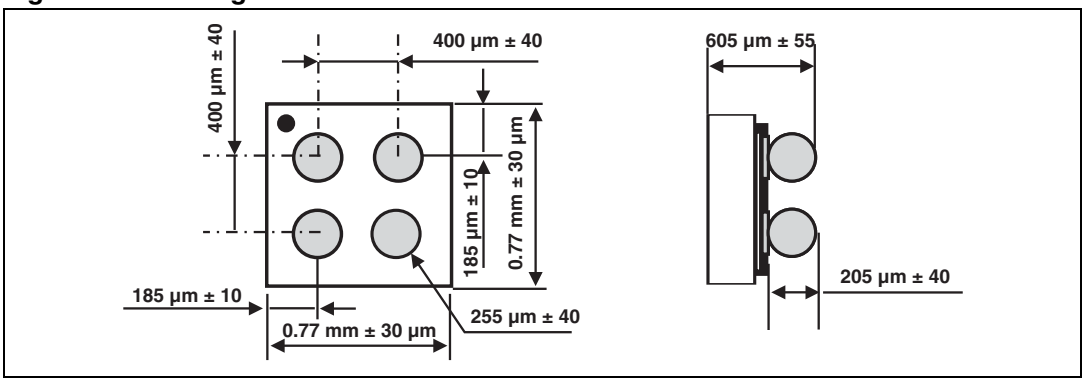


Figure 18. Foot print recommendations

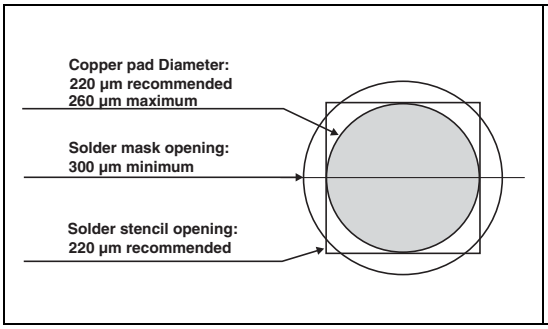
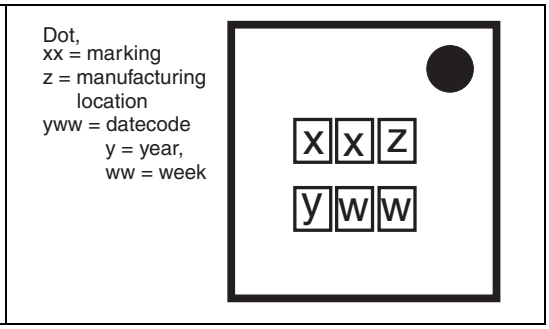
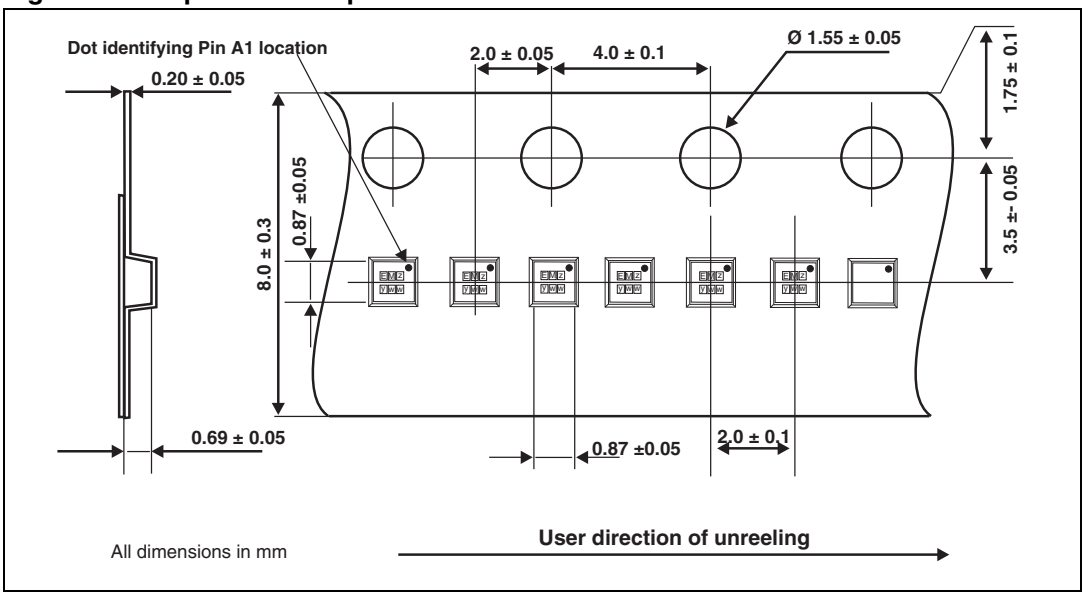


Figure 19. Marking



Note: Product marking may be rotated by 90° for assembly plant differentiation. In no case should this product marking be used to orient the component for its placement on a PCB. Only pin 1 mark is to be used for this purpose.

Figure 20. Tape and reel specifications



Note: More information is available in the Application notes:

AN2348: "400 µm Flip Chip: package description and recommendations for use"

AN1751: "EMI Filters: recommendations and measurements"

4 Ordering information

Table 3. Ordering information

Order code	Marking(1)	Package	Weight	Base qty	Delivery mode
LFTVS18-1F3	EM	Flip Chip	0.79 mg	10 000	Tape and reel (7")

1. The marking can be rotated by 90° to differentiate assembly location

5 Revision history

Table 4. Document revision history

Date	Revision	Changes
06-Mar-2008	1	Initial release.
04-Sep-2008	2	Updated V_F to 1.05 V. Updated *Figure 20* to show pitch of 2.0 mm. Updated I_{FSM} to 11 A. Updated *Figure 5*, *Figure 7*, and *Figure 8*.
14-Sep-2012	3	Updated all graphics in *1: Characteristics*. Added tolerances to pocket dimensions in *Figure 20*.

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