1 Characteristics

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

Symbol	Parameter		Value	Unit
V_{PP}	Peak pulse voltage	IEC 61000-4-2, contact discharge	30	kV
I_{pp}	Peak pulse current	8/20 µs	30	A
T_{stg} T_j	Storage temperature range Operating junction temperature range		-55 to 150 -40 to 125	°C °C
T_L	Maximum temperature for soldering during 10 s		260	°C

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

Order code	I_{RM} @ V_{RM}		V_{BR} @ I_{BR}		V_{CL} @ I_{PP} (8/20 µs)		C		ΔC
	Max. µA	V	Min. V	mA	Max. V	A	Typ. pF(1)	Max. pF(1)	Typ. pF(2)
DSL02-005SC5	0.5	5	6	1	18	24	3	5	0.3
DSL02-008SC5	0.5	8	10	1	22	24	3	5	0.3
DSL02-010SC5	0.5	10	11	1	24	24	3	5	0.3

1. Test conditions: V_R = 2 V bias, V_{RMS} = 1 V, F = 1 MHz
2. Measured between 1 V and V_{RM}

Figure 2. Peak pulse power dissipation versus initial junction temperature (typical values, 8/20µs)

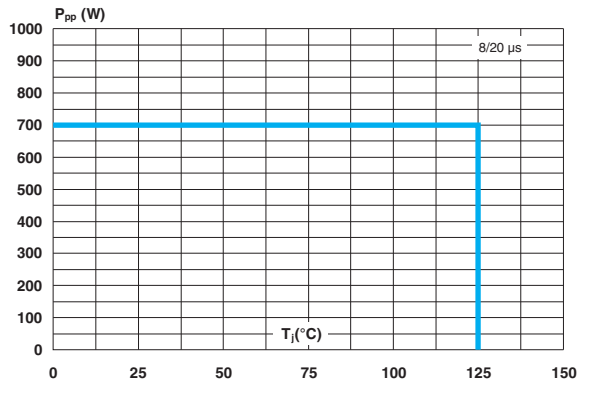


Figure 3. Leakage current versus junction temperature (typical values)

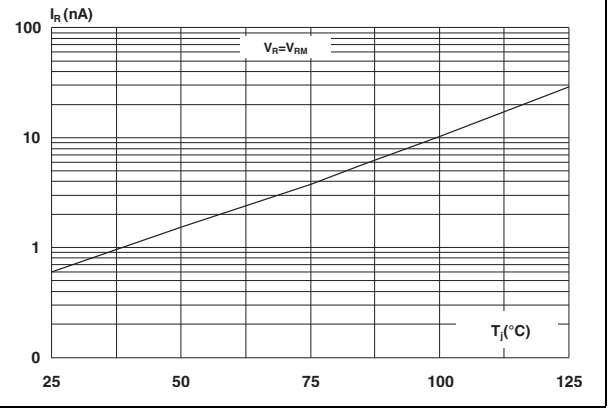


Figure 4. Junction capacitance versus reverse voltage applied (typical values)

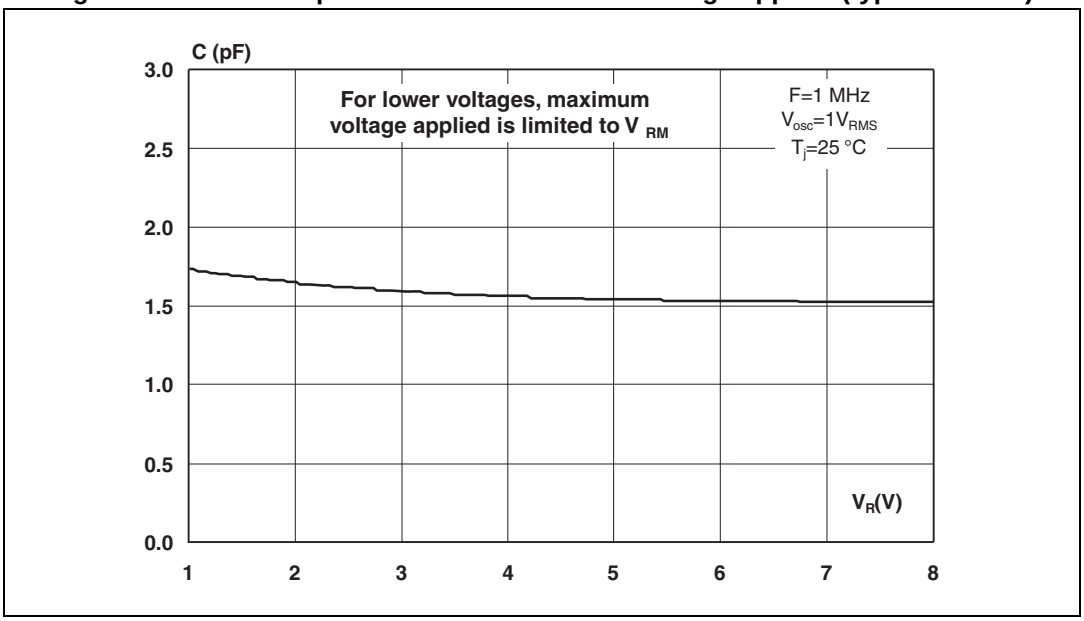
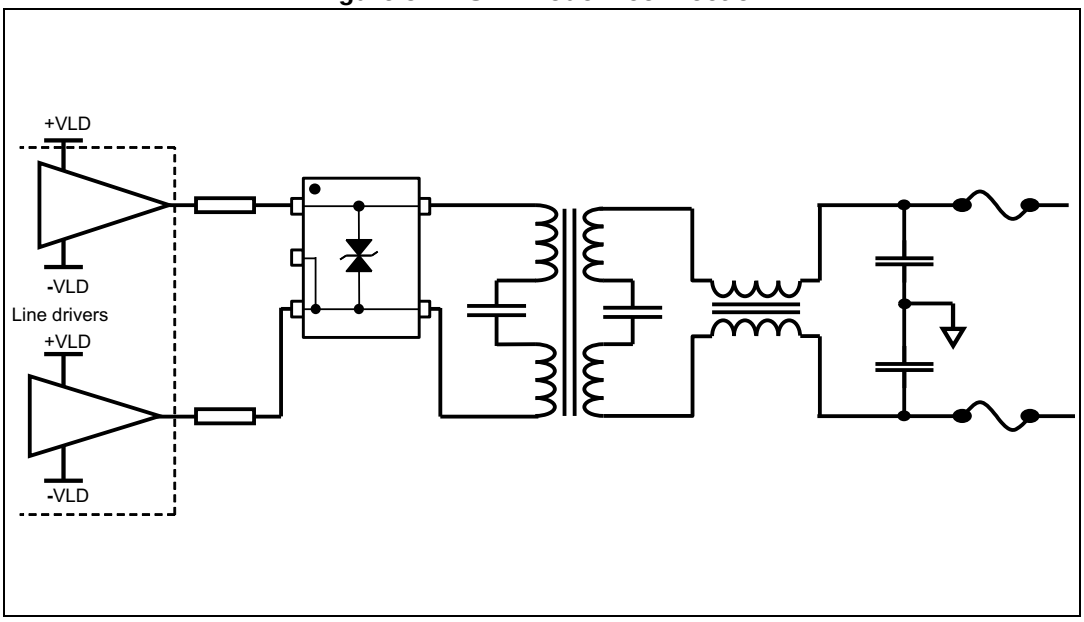


Figure 5. xDSL2 modem connection



2 Package information

- Epoxy meets UL94, V0
- Lead-free package

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 6. SOT23-5L dimension definitions

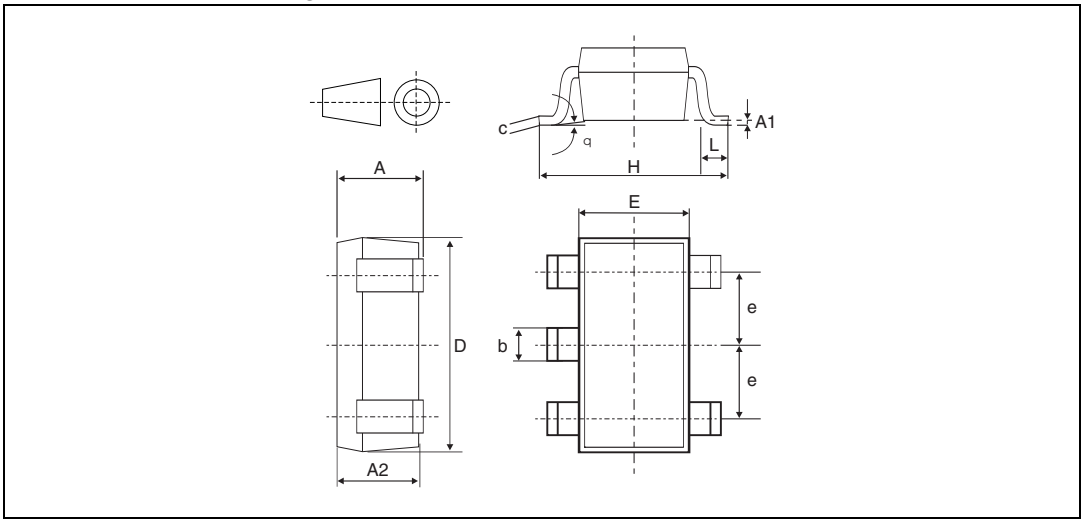


Table 3. SOT23-5L dimension values

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.90		1.45	0.035		0.057
A1	0		0.15	0		0.006
A2	0.90		1.30	0.035		0.051
b	0.30		0.50	0.012		0.020
c	0.09		0.20	0.004		0.008
D	2.80		3.05	0.11		0.118
E	1.50		1.75	0.059		0.069
e		0.95			0.037	
H	2.60		3.00	0.102		0.118
L	0.30		0.60	0.012		0.024
M	0°		10°	0°		10°

Figure 7. Footprint recommendations dimensions in mm (inches)

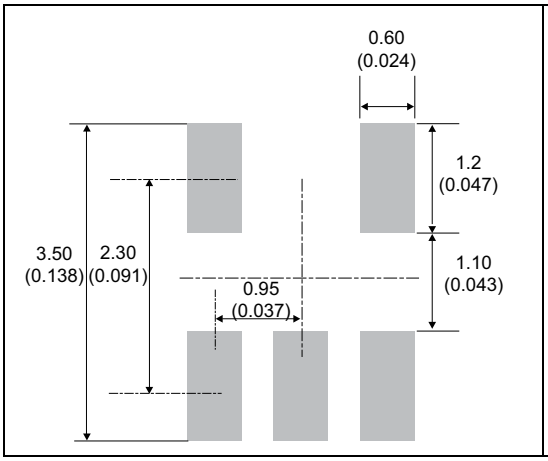
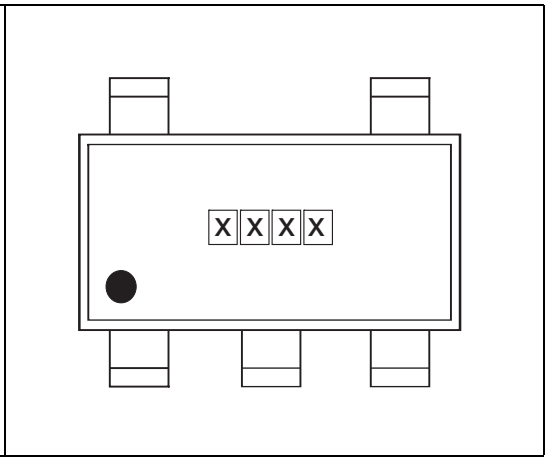
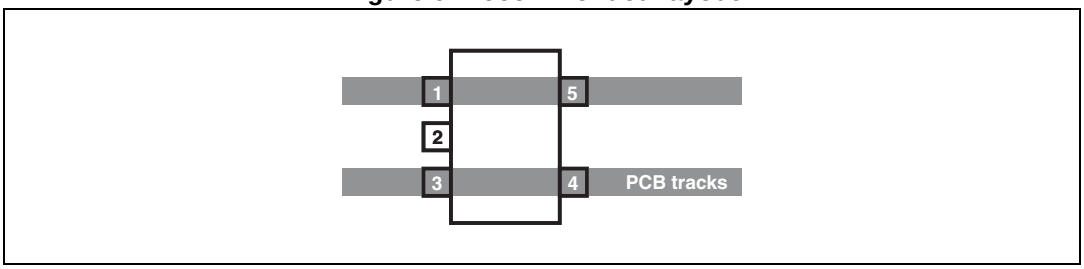


Figure 8. Marking layout



3 PCB recommendation

Figure 9. Recommended layout



Concerning *Figure 9*:

- Pins 1 and 5 must be connected together.
- Pins 3 and 4 must be connected together.
- Pin 2 must not be connected

4 Ordering information

Figure 10. Ordering information scheme

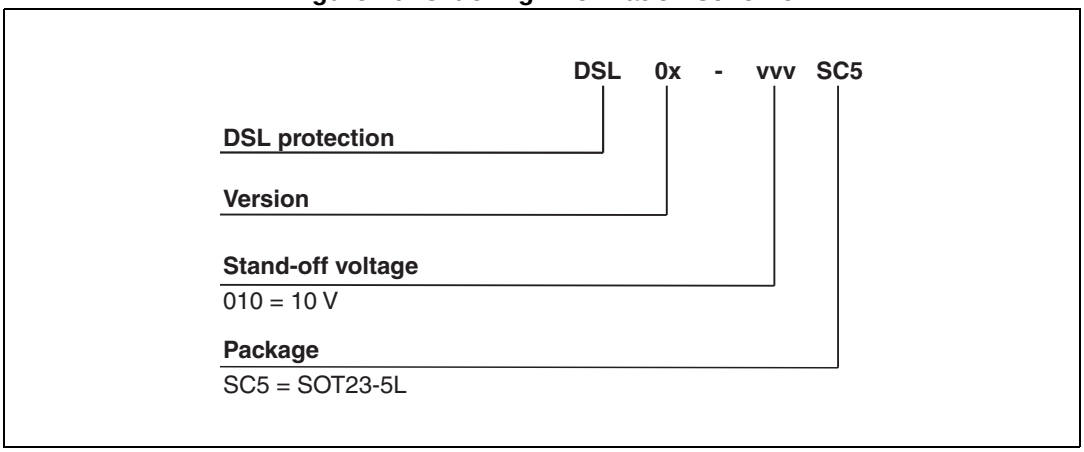


Table 4. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
DSL02-005SC5	YT05	SOT23-5L	16 mg	3000	Tape and reel
DSL02-008SC5	YT08				
DSL02-010SC5	YT10				

5 Revision history

Table 5. Document revision history

Date	Revision	Changes
30-Oct-2013	1	Initial release.
03-Feb-2015	2	Updated *Features* and *Description*. Added *Figure 5*.