

# 1 Characteristics

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

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

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

Order code	$I_{RM}$ @ $V_{RM}$		$V_{BR}$ @ $I_{BR}$		$V_{CL}$ @ $I_{PP}$ (8/20 $\mu\text{s}$ )		C		$\Delta C$
	Max. $\mu\text{A}$	V	Min. V	mA	Max. V	A	Typ. $\text{pF}^{(1)}$	Max. $\text{pF}^{(1)}$	Typ. $\text{pF}^{(2)}$
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:  $V_R = 2\text{ V}$  bias,  $V_{RMS} = 1\text{ V}$ ,  $F = 1\text{ MHz}$

2. Measured between 1 V and  $V_{RM}$

Figure 2. Peak pulse power dissipation versus initial junction temperature (typical values, 8/20 $\mu\text{s}$ )

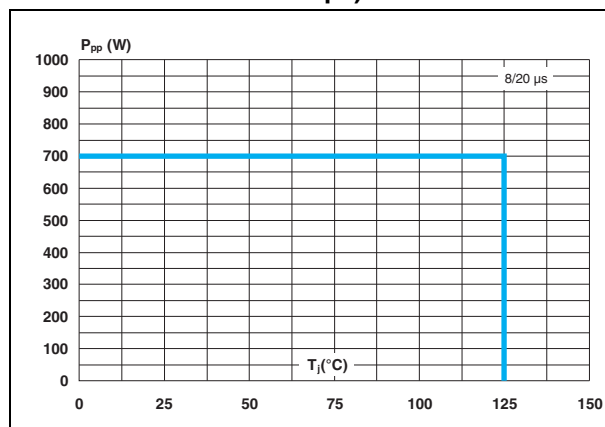


Figure 3. Leakage current versus junction temperature (typical values)

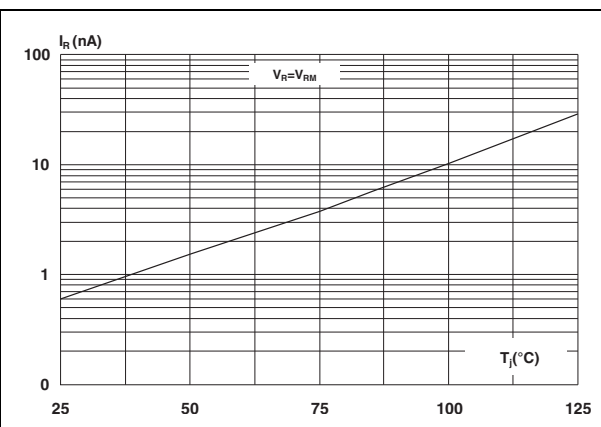


Figure 4. Junction capacitance versus reverse voltage applied (typical values)

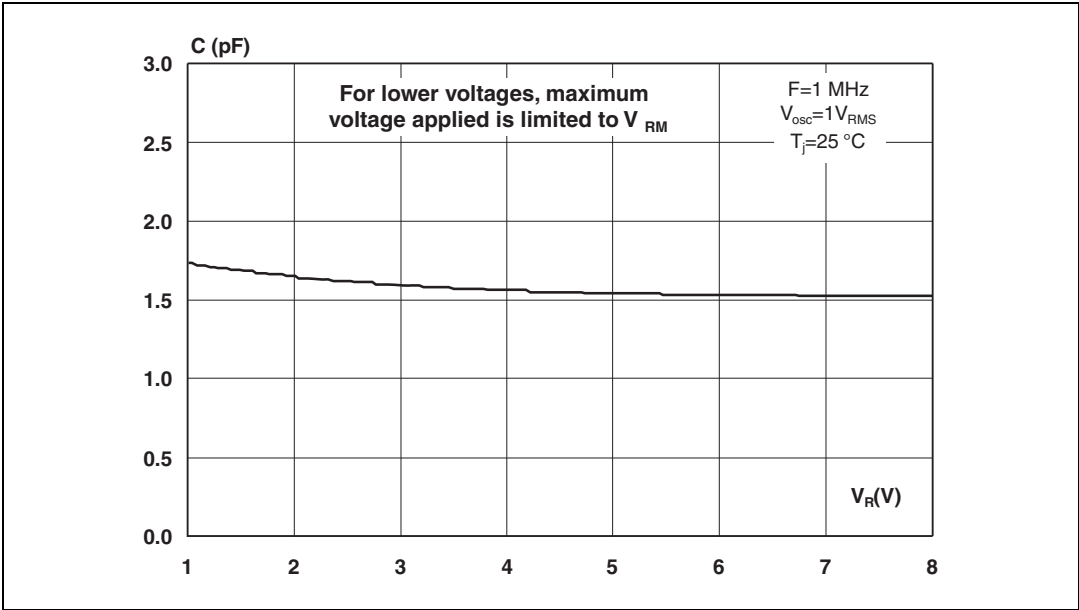
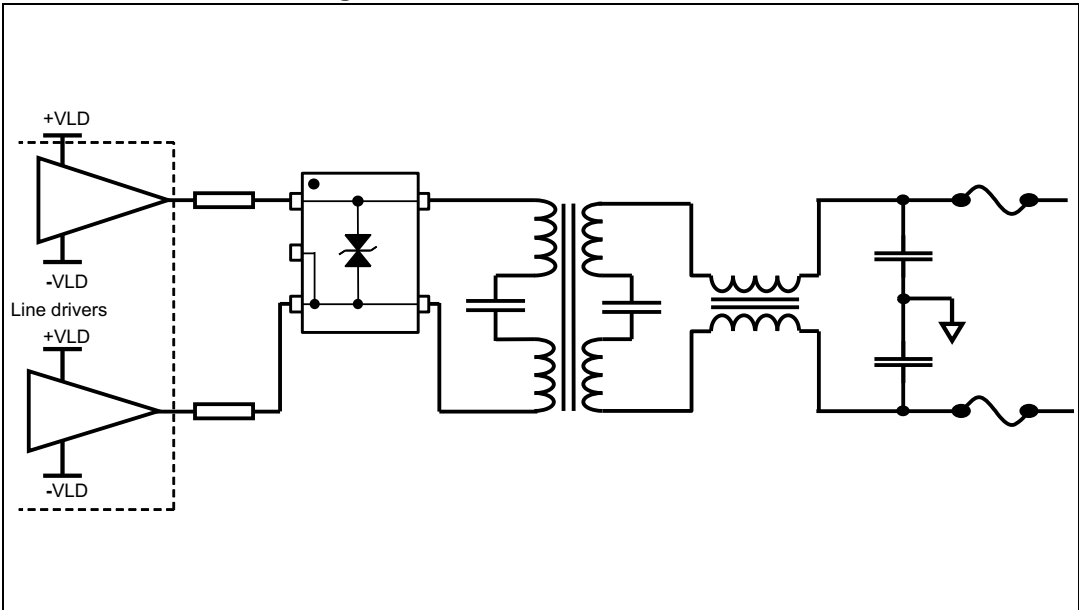


Figure 5. xDSL2 modem connection



# 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](http://www.st.com). ECOPACK® is an ST trademark.

Figure 6. SOT23-5L dimension definitions

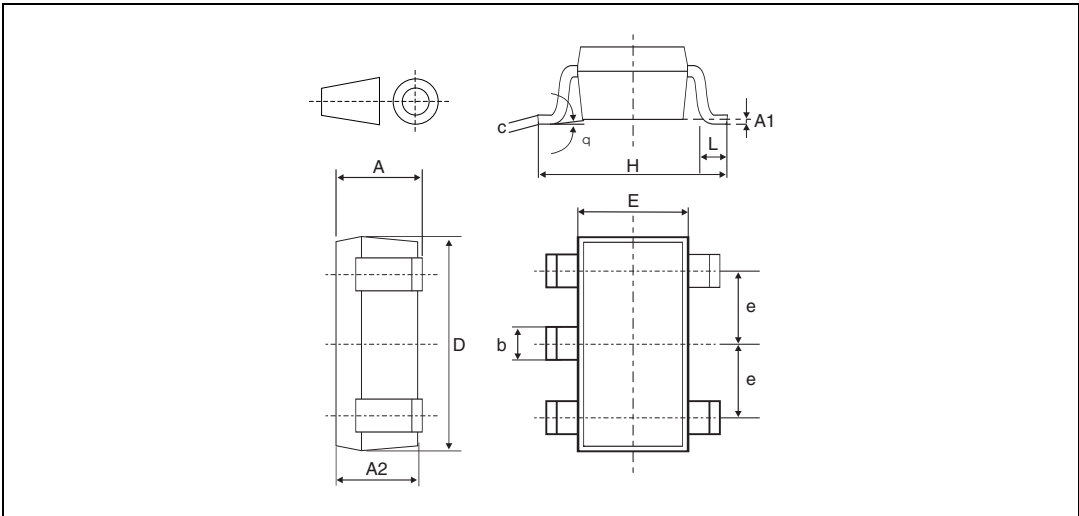


Table 3. SOT23-5L dimension values

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)

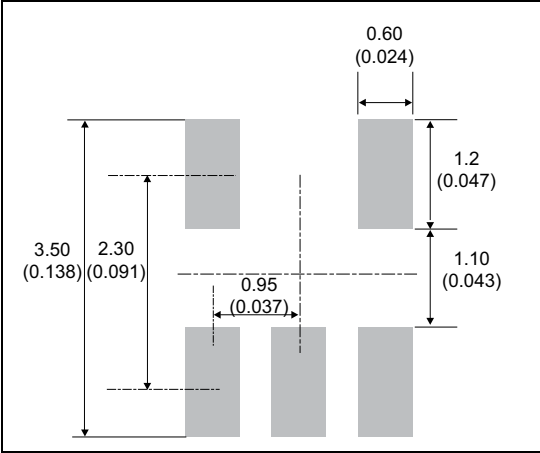
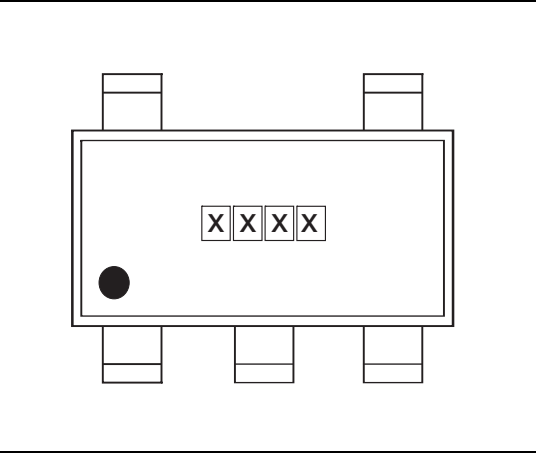
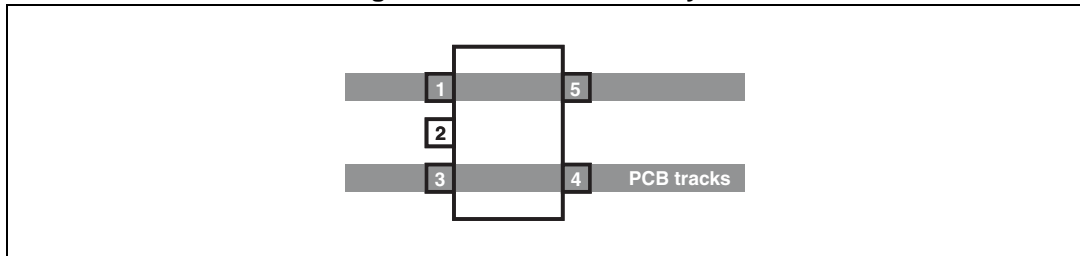


Figure 8. Marking layout



### 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

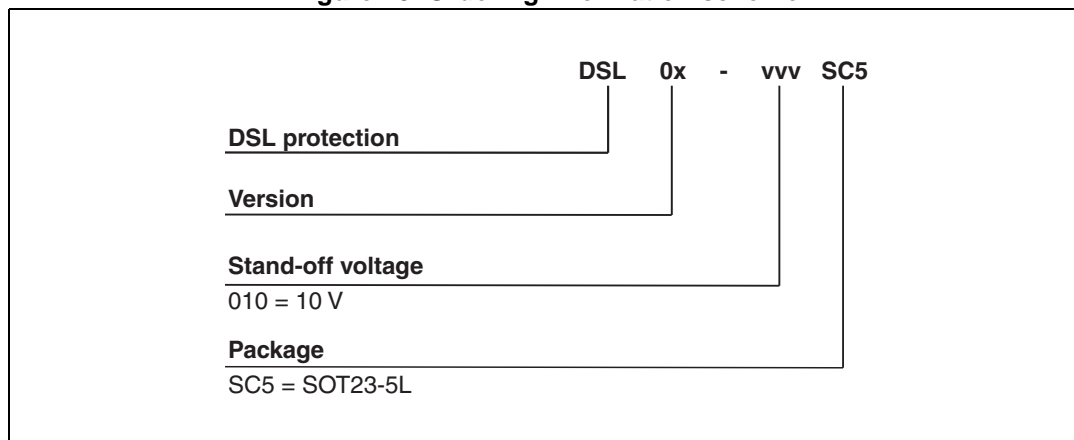


Table 4. Ordering information

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 <a href="#">Features</a> and <a href="#">Description</a> . Added <a href="#">Figure 5</a> .

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