

# 1 Characteristics

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

Symbol	Parameter		Value	Unit
$V_{pp}$	Peak pulse voltage	IEC 61000-4-5 contact discharge	30	kV
$I_{pp}$	Peak pulse current	8/20 $\mu$ s	16	A
$T_{stg}$	Storage temperature range		-55 to 150	°C
$T_j$	Operating junction temperature range		-40 to 125	°C
$T_L$	Maximum temperature for soldering during 10s		260	°C

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

Order code	$I_{RM} @ V_{RM}$ I/O to I/O		$V_{BR} @ I_{BR}$ I/O to I/O		$V_{CL} @ I_{PP}$ 8/20 $\mu$ s I/O to I/O		C I/O to I/O	C I/O to I/O	$\Delta C$ I/O to I/O
	Max. $\mu$ A	V	Min V	mA	Max. V	A	typ. (1) pF	max.(1) pF	typ.(2) pF
DSL03-010SC6	0.2	10	10.5	1	29	16	0.5	3	0.2
DSL03-022SC6	0.2	22	25	1	52	16	0.5	3	0.2
DSL03-024SC6	0.2	24	28	1	55	16	0.5	3	0.2

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 $\mu$ s)

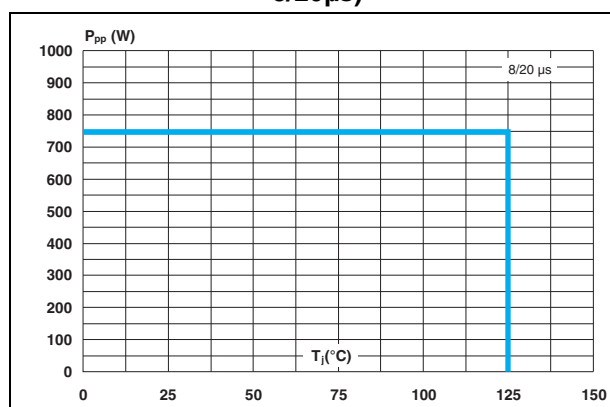


Figure 3. Leakage current versus junction temperature (typical values)

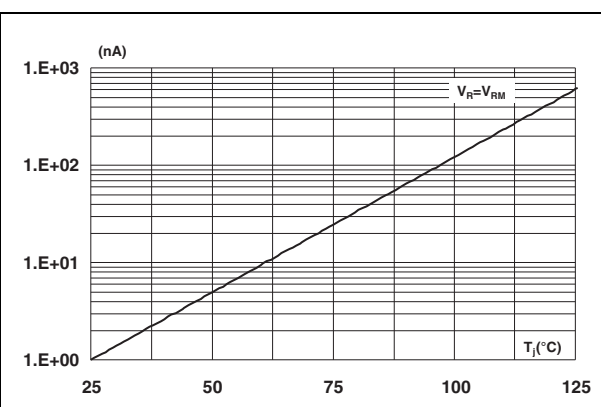


Figure 4. Junction capacitance versus reverse voltage applied (typical values)

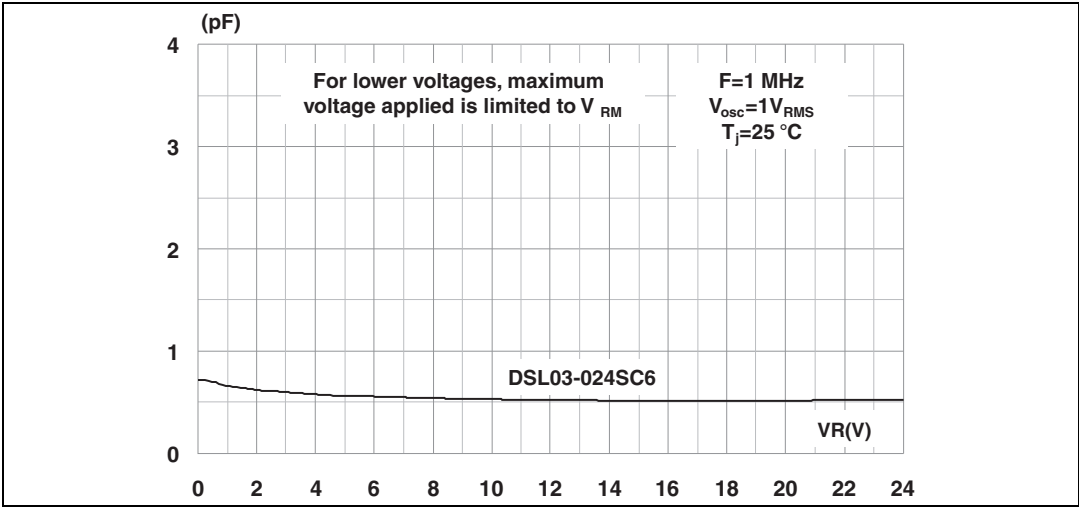


Figure 5. VDSL2 class AB modem connection

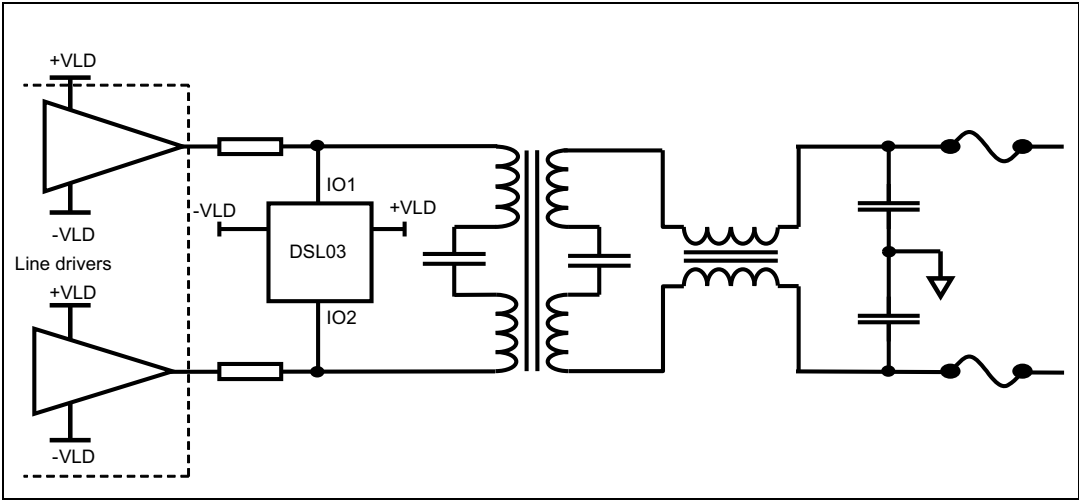
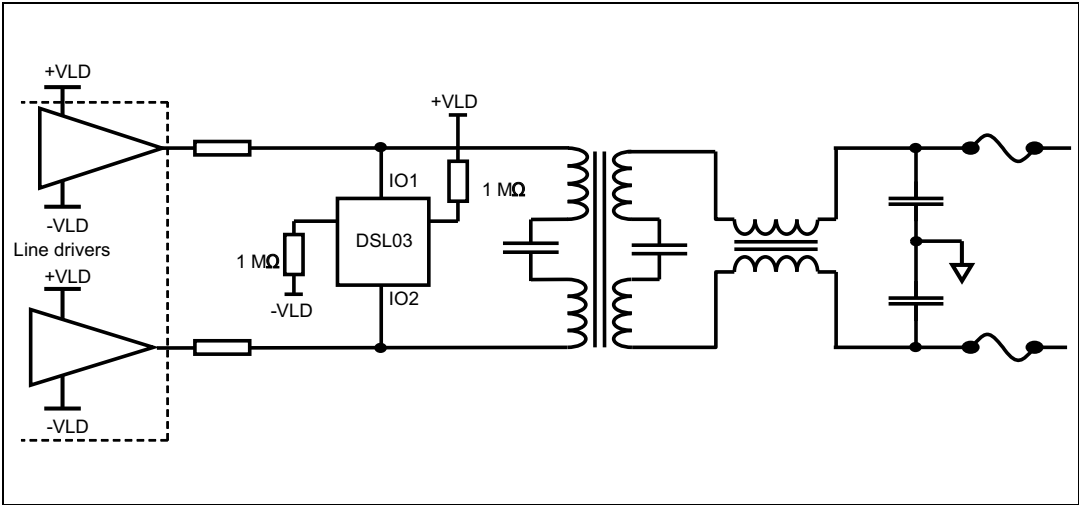


Figure 6. VDSL2 class H modem connection

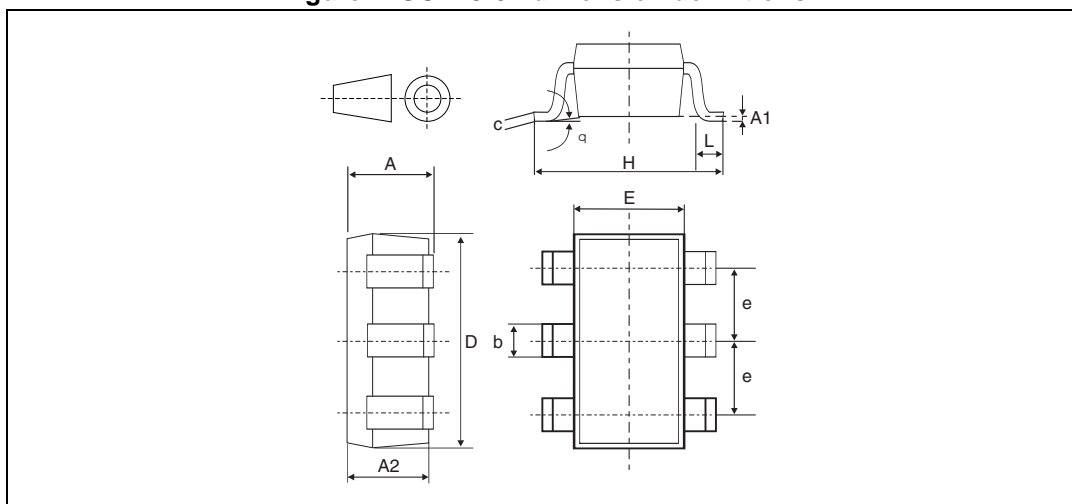


## 2 Package information

- 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 7. SOT23-6L dimension definitions**



**Table 3. SOT23-6L dimension values**

Ref.	Dimensions					
	Millimeters			Inches		
	Min.		Max.	Min.		Max.
A	0.90		1.45	0.035		0.057
A1	0		0.10	0		0.004
A2	0.90		1.30	0.035		0.051
b	0.35		0.50	0.014		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	0.10		0.60	0.004		0.024
θ	0°		10°	0°		10°

Figure 8. Footprint recommendations  
dimensions in mm (inches)

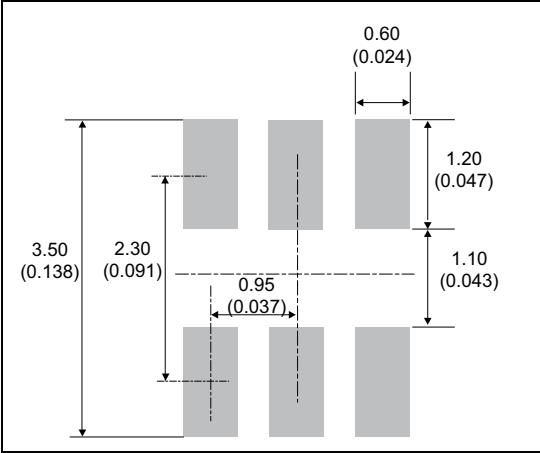
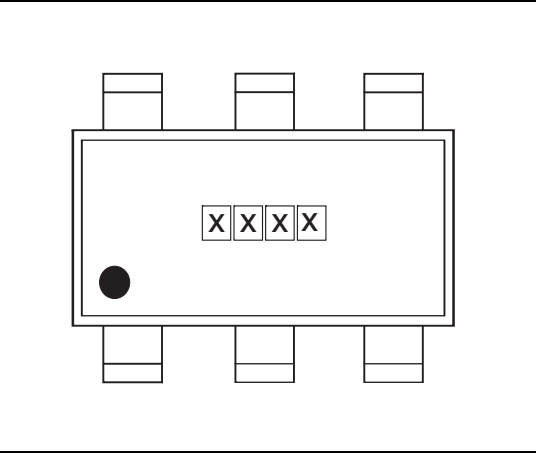


Figure 9. Marking layout



### 3 Ordering information

Figure 10. Ordering information scheme

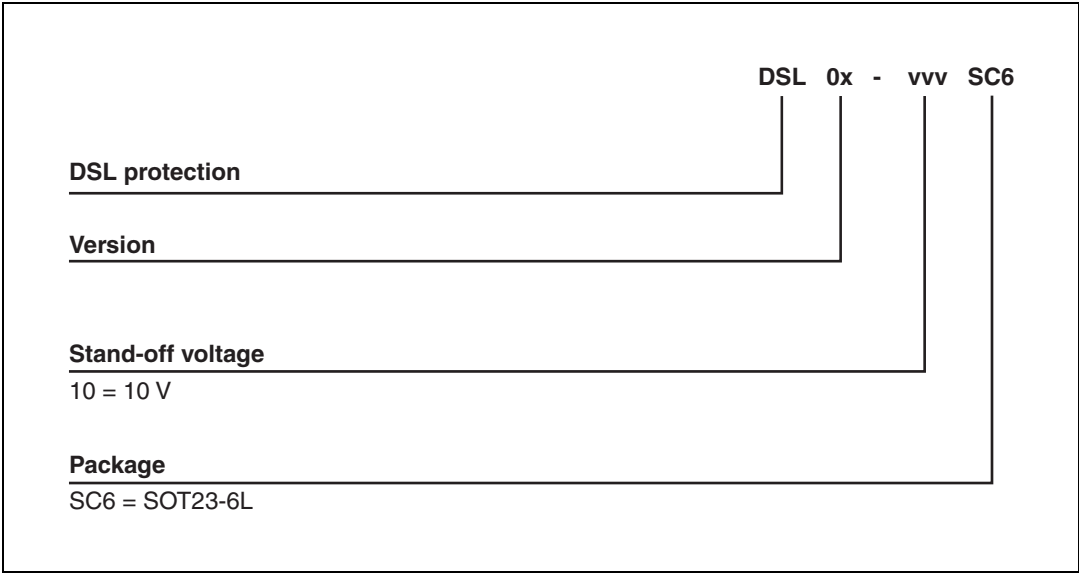


Table 4. Ordering information

Ordering code	Marking	Package	Weight	Base qty	Delivery mode
DSL03-010SC6	ST10	SOT23-6L	17.3 mg	3000	Tape and reel
DSL03-022SC6	ST22				
DSL03-024SC6	ST24				

### 4 Revision history

Table 5. Document revision history

Date	Revision	Changes
07-Feb-2014	1	Initial release
03-Feb-2015	2	Updated <a href="#">Features</a> and <a href="#">Description</a> . Added <a href="#">Figure 5</a> and <a href="#">Figure 6</a> .

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