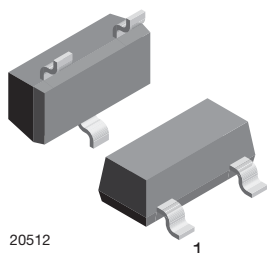
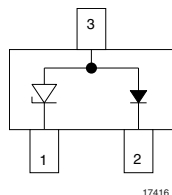
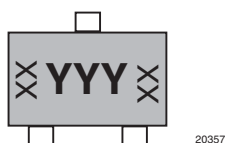


Low Capacitance ESD Protection Diodes for High-Speed Data Interfaces



MARKING (example only)



Bar = cathode marking

YYY = type code (see table below)

XX = date code

FEATURES

- IEC 61000-4-5 (lightning) see I_{PPM} below
- ESD-protection acc. IEC 61000-4-2
± 8 kV contact discharge
± 15 kV air discharge
- Small package for use in portable electronics
- Space saving SOT-23 package
- High temperature soldering guaranteed:
260 °C/10 s at terminals
- Low capacitance for high speed data lines, cellular handsets, USB port protection, LAN equipment, peripherals
- AEC-Q101 qualified
- e3 - Sn
- Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC



RoHS
COMPLIANT
GREEN
(5-2008)**
Available

Note

** Please see document "Vishay Material Category Policy":
www.vishay.com/doc?99902

ORDERING INFORMATION

DEVICE NAME	ENVIRONMENTAL STATUS	ORDERING CODE	TAPED UNITS PER REEL (8 mm TAPE ON 7" REEL)	MINIMUM ORDER QUANTITY
GL05T	Standard	GL05T-GS08	3000	15 000
	Green	GL05T-V-G-08		
GL12T	Standard	GL12T-GS08	3000	15 000
	Green	GL12T-V-G-08		
GL15T	Standard	GL15T-GS08	3000	15 000
	Green	GL15T-V-G-08		
GL24T	Standard	GL24T-GS08	3000	15 000
	Green	GL24T-V-G-08		

PACKAGE DATA

DEVICE NAME	PACKAGE NAME	TYPE CODE	ENVIRONMENTAL STATUS	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
GL05T	SOT-23	L05	Standard	8.8 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
		L06	Green	8.1 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
GL12T	SOT-23	L12	Standard	8.8 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
		L13	Green	8.1 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
GL15T	SOT-23	L15	Standard	8.8 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
		L16	Green	8.1 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
GL24T	SOT-23	L24	Standard	8.8 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals
		L25	Green	8.1 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals

**ABSOLUTE MAXIMUM RATINGS GL05T**

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	8/20 μ s	I_{PPM}	17	A
Peak pulse power	8/20 μ s waveform	P_{PP}	300	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 8	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 15	kV
Operating temperature	Junction temperature	T_J	- 55 to + 125	$^{\circ}$ C
Storage temperature		T_{STG}	- 55 to + 150	$^{\circ}$ C

ABSOLUTE MAXIMUM RATINGS GL12T

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	8/20 μ s	I_{PPM}	12	A
Peak pulse power	8/20 μ s waveform	P_{PP}	300	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 8	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 15	kV
Operating temperature	Junction temperature	T_J	- 55 to + 125	$^{\circ}$ C
Storage temperature		T_{STG}	- 55 to + 150	$^{\circ}$ C

ABSOLUTE MAXIMUM RATINGS GL15T

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	8/20 μ s	I_{PPM}	10	A
Peak pulse power	8/20 μ s waveform	P_{PP}	300	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 8	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 15	kV
Operating temperature	Junction temperature	T_J	- 55 to + 125	$^{\circ}$ C
Storage temperature		T_{STG}	- 55 to + 150	$^{\circ}$ C

ABSOLUTE MAXIMUM RATINGS GL24T

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Peak pulse current	8/20 μ s	I_{PPM}	5	A
Peak pulse power	8/20 μ s waveform	P_{PP}	300	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 8	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses		± 15	kV
Operating temperature	Junction temperature	T_J	- 55 to + 125	$^{\circ}$ C
Storage temperature		T_{STG}	- 55 to + 150	$^{\circ}$ C

ELECTRICAL CHARACTERISTICS GL05T

PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	$N_{channel}$	-	-	-	lines
Reverse stand-off voltage	at $I_R = 1 \mu$ A	V_{RWM}	-	-	5	V
Reverse current	at $V_R = 5$ V	I_R	-	-	20	μ A
Reverse breakdown voltage	at $I_R = 1$ mA	V_{BR}	6	-	-	V
Reverse clamping voltage	at $I_{PP} = 1$ A	V_C	-	-	9.8	V
	at $I_{PP} = 5$ A		-	-	11	V
Capacitance	at $V_R = 0$ V; $f = 1$ MHz	C_D	-	5	-	pF

ELECTRICAL CHARACTERISTICS GL12T

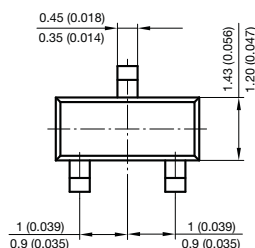
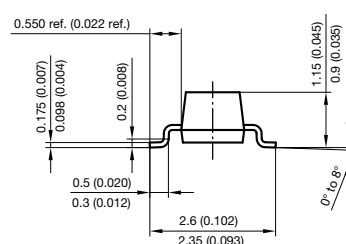
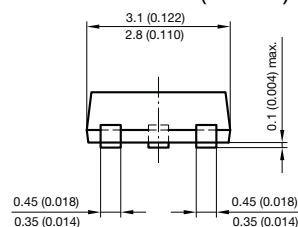
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N_{channel}	-	-	-	lines
Reverse stand-off voltage	at $I_R = 1 \mu\text{A}$	V_{RWM}	-	-	12	V
Reverse current	at $V_R = 5 \text{ V}$	I_R	-	-	1	μA
Reverse breakdown voltage	at $I_R = 1 \text{ mA}$	V_{BR}	13.3	-	-	V
Reverse clamping voltage	at $I_{\text{PP}} = 1 \text{ A}$	V_C	-	-	19	V
	at $I_{\text{PP}} = 5 \text{ A}$		-	-	24	V
Capacitance	at $V_R = 0 \text{ V}$; $f = 1 \text{ MHz}$	C_D	-	5	-	pF

ELECTRICAL CHARACTERISTICS GL15T

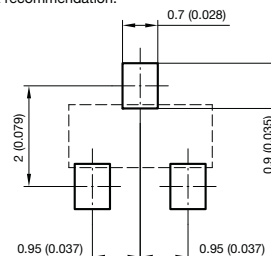
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N_{channel}	-	-	-	lines
Reverse stand-off voltage	at $I_R = 1 \mu\text{A}$	V_{RWM}	-	-	15	V
Reverse current	at $V_R = 5 \text{ V}$	I_R	-	-	1	μA
Reverse breakdown voltage	at $I_R = 1 \text{ mA}$	V_{BR}	16.7	-	-	V
Reverse clamping voltage	at $I_{\text{PP}} = 1 \text{ A}$	V_C	-	-	24	V
	at $I_{\text{PP}} = 5 \text{ A}$		-	-	33	V
Capacitance	at $V_R = 0 \text{ V}$; $f = 1 \text{ MHz}$	C_D	-	5	-	pF

ELECTRICAL CHARACTERISTICS GL24T

PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	N_{channel}	-	-	-	lines
Reverse stand-off voltage	at $I_R = 1 \mu\text{A}$	V_{RWM}	-	-	24	V
Reverse current	at $V_R = 5 \text{ V}$	I_R	-	-	1	μA
Reverse breakdown voltage	at $I_R = 1 \text{ mA}$	V_{BR}	26.7	-	-	V
Reverse clamping voltage	at $I_{\text{PP}} = 1 \text{ A}$	V_C	-	-	43	V
	at $I_{\text{PP}} = 5 \text{ A}$		-	-	55	V
Capacitance	at $V_R = 0 \text{ V}$; $f = 1 \text{ MHz}$	C_D	-	5	-	pF

PACKAGE DIMENSIONS in millimeters (inches): **SOT-23**


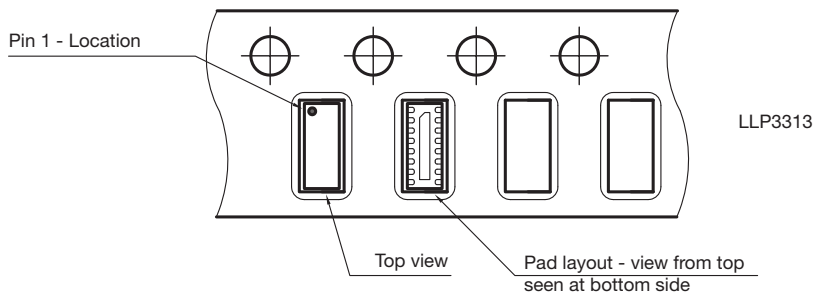
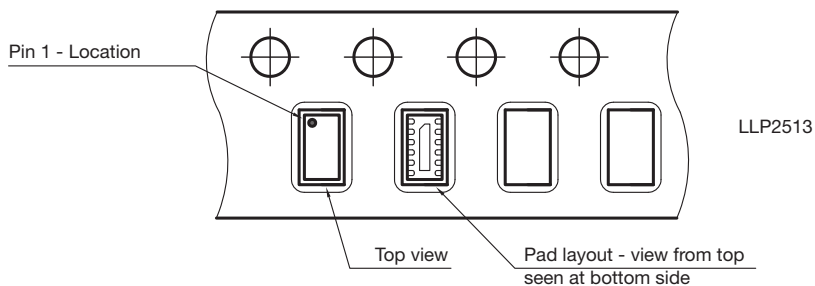
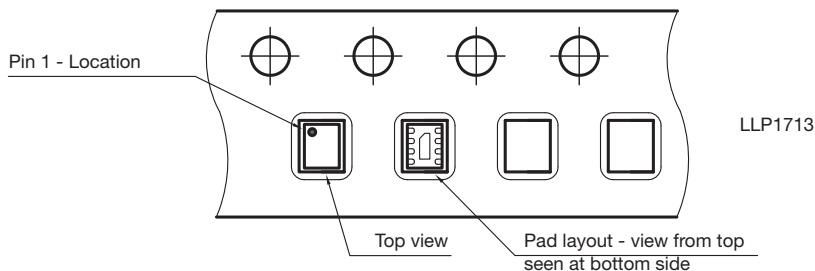
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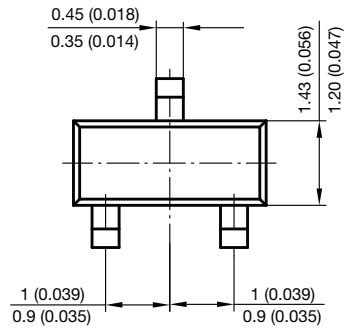
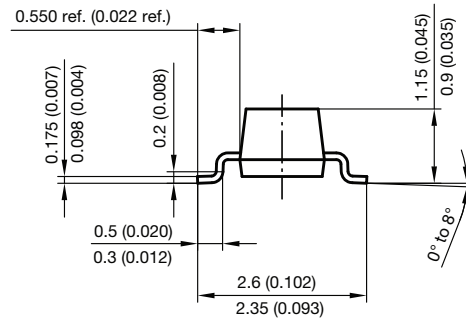
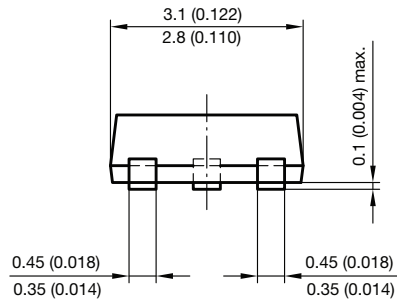


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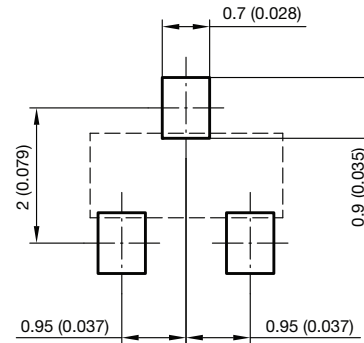
Rev. 8 - Date: 23.Sept.2009

17418



PACKAGE DIMENSIONS in millimeters (inches)

Foot print recommendation:



Document no.: 6.541-5014.01-4

Rev. 8 - Date: 23.Sept.2009

17418



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