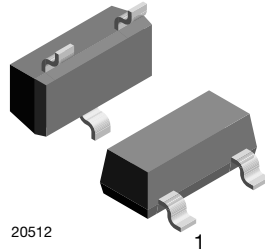
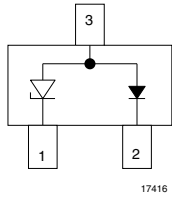
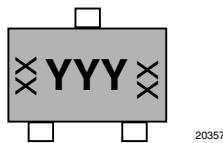


Low Capacitance ESD Protection Diodes for High-Speed Data Interfaces



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
- e3 - Sn
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



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	GL05T-GS08	3000	15 000
	Green	GL05T-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

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

GL05T to GL24T



Vishay Semiconductors Low Capacitance ESD Protection
Diodes for High-Speed Data
Interfaces

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	°C
Storage temperature		T _{STG}	- 55 to + 150	°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	°C
Storage temperature		T _{STG}	- 55 to + 150	°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	°C
Storage temperature		T _{STG}	- 55 to + 150	°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	°C
Storage temperature		T _{STG}	- 55 to + 150	°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 working voltage	at I _R = 1 μ 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



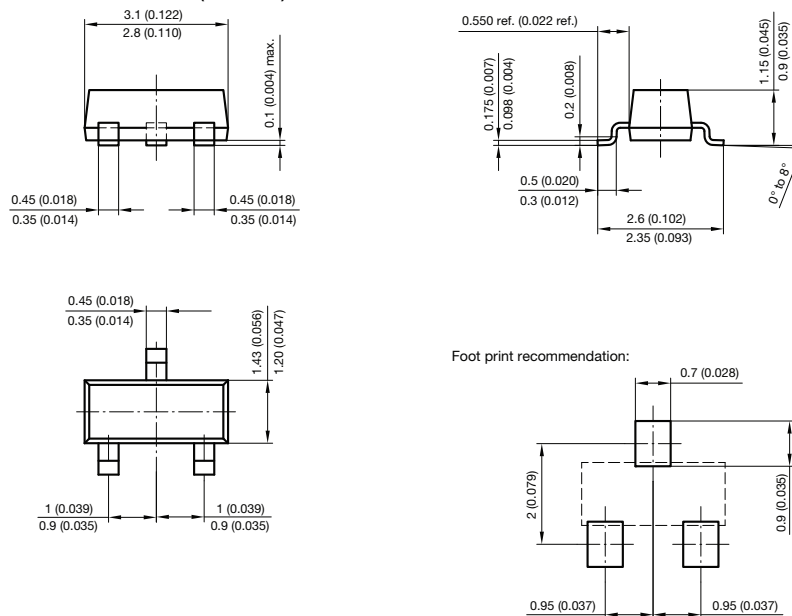
Low Capacitance ESD Protection Diodes for High-Speed Data Interfaces

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 working voltage	at $I_R = 1 \mu A$	V_{RWM}	12	-	-	V
Reverse current	at $V_R = 5 V$	I_R	-	-	1	μA
Reverse breakdown voltage	at $I_R = 1 mA$	V_{BR}	13.3	-	-	V
Reverse clamping voltage	at $I_{PP} = 1 A$	V_C	-	-	19	V
	at $I_{PP} = 5 A$		-	-	24	V
Capacitance	at $V_R = 0 V; f = 1 MHz$	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 working voltage	at $I_R = 1 \mu A$	V_{RWM}	15	-	-	V
Reverse current	at $V_R = 5 V$	I_R	-	-	1	μA
Reverse breakdown voltage	at $I_R = 1 mA$	V_{BR}	16.7	-	-	V
Reverse clamping voltage	at $I_{PP} = 1 A$	V_C	-	-	24	V
	at $I_{PP} = 5 A$		-	-	33	V
Capacitance	at $V_R = 0 V; f = 1 MHz$	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 working voltage	at $I_R = 1 \mu A$	V_{RWM}	24	-	-	V
Reverse current	at $V_R = 5 V$	I_R	-	-	1	μA
Reverse breakdown voltage	at $I_R = 1 mA$	V_{BR}	26.7	-	-	V
Reverse clamping voltage	at $I_{PP} = 1 A$	V_C	-	-	43	V
	at $I_{PP} = 5 A$		-	-	55	V
Capacitance	at $V_R = 0 V; f = 1 MHz$	C_D	-	5	-	pF

PACKAGE DIMENSIONS in millimeters (inches): SOT-23



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 17418



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