

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

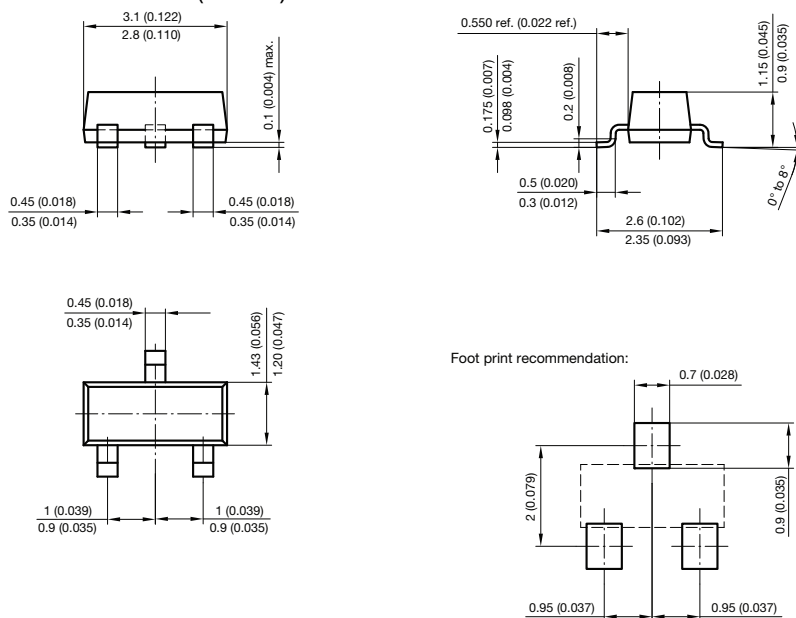
PARAMETER	TEST CONDITIONS/REMARKS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Protection paths	Number of lines which can be protected	$N_{channel}$	-	-	-	lines
Reverse working voltage	at $I_R = 1 \mu A$	V_{RWM}	5	-	-	V
Reverse current	at $V_R = 5 V$	I_R	-	-	20	μA
Reverse breakdown voltage	at $I_R = 1 mA$	V_{BR}	6	-	-	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 working 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 working 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 working 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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