

FEATURES

| Protects one I/O line (bidirectional)

| Low clamping voltage

| Working voltages: 3V, 5V, 8V, 12V, 15V, 24V

| Low leakage current

| Response Time is < 1 ns

APPLICATIONS

| Cell Phone Handsets and Accessories

| Microprocessor based equipment

| Personal Digital Assistants (PDA's)

| Notebooks, Desktops, and Servers

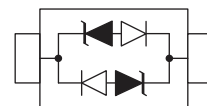
| Portable Instrumentation

| Peripherals

| USB Interface



SOD-323



Schematic Symbol

IEC COMPATIBILITY

| IEC61000-4-2 (ESD) ± 8 kV (Contact), ± 15 kV

| (Air)

APPROVALS

RoHS Compliance with 2011/65/EU

HF Compliance with IEC61249-2-21:2003

THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Contact)	± 8	kV
	ESD per IEC 61000-4-2 (Air)	± 15	
P_{PP}	Peak Pulse Power (8/20 μ s)	300	W
T_{OPT}	Operating Temperature	-55 to +150	$^{\circ}$ C
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}$ C
T_L	Lead Soldering Temperature	260	$^{\circ}$ C

ELECTRICAL CHARACTERISTICS

PART NUMBER	Marking	V_{RWM} (V)	$V_B@1mA$ (V)	I_T (mA)	$V_C@1A$ (V)	$V_C@I_{PP}$ (V)		I_R (μ A)	C_T (pF)
		Max	Min	Typ.	Max	Max	I_{PP} (A)	Max	Typ.
GBLC03C	CC	3.0	4.0	1.0	7.0	13.9	8.0	2.0	0.8
GBLC05C	AC	5.0	6.0	1.0	9.8	18.3	8.0	1.0	0.8
GBLC08C	BC	8.0	8.5	1.0	13.4	18.5	8.0	1.0	0.8
GBLC12C	DC	12.0	13.3	1.0	19.0	28.6	6.0	1.0	0.8
GBLC15C	EC	15.0	16.7	1.0	24.0	31.8	5.0	1.0	0.8
GBLC24C	HC	24.0	26.7	1.0	43.0	56.0	3.0	1.0	0.8

CHARACTERISTIC CURVES

Fig 1 8/20 μ s Waveform per IEC61000-4-5

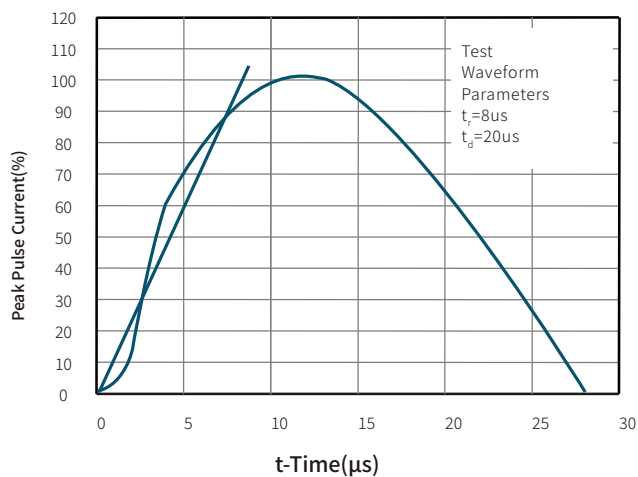


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

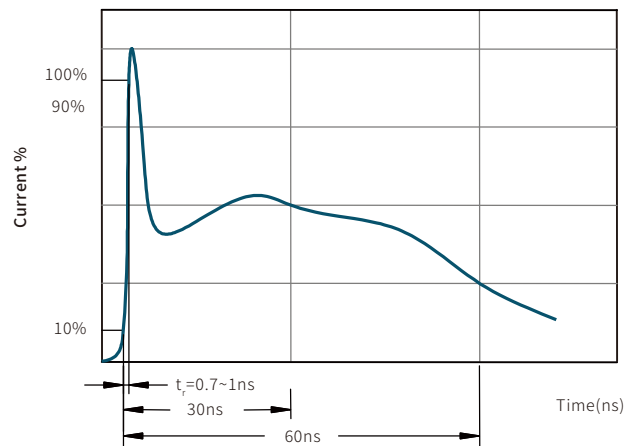


Fig 3 Voltage vs Capacitance

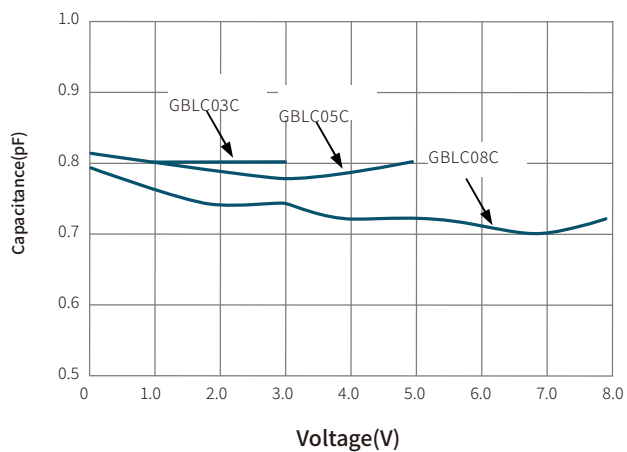


Fig 4 Voltage vs Capacitance

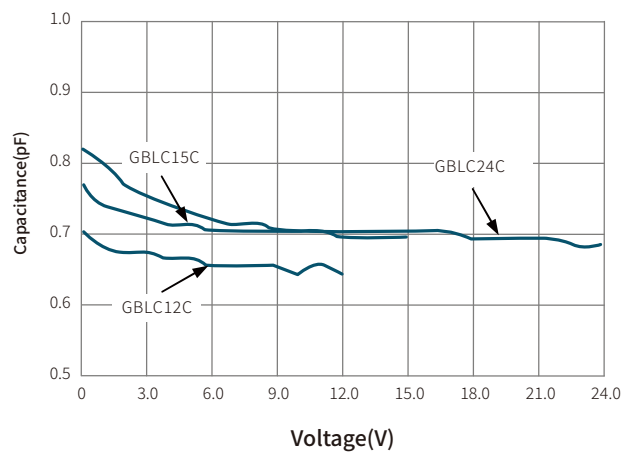
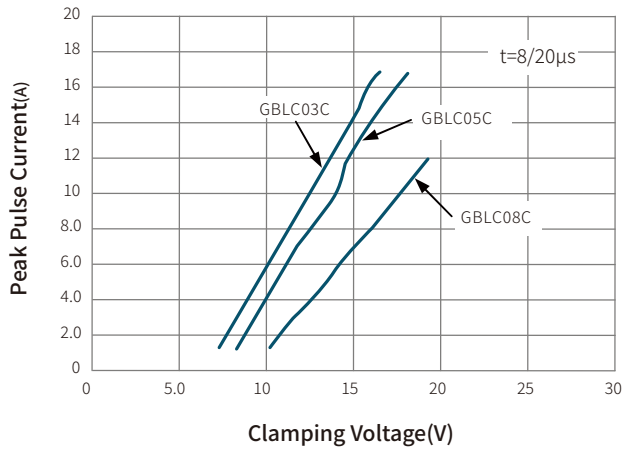
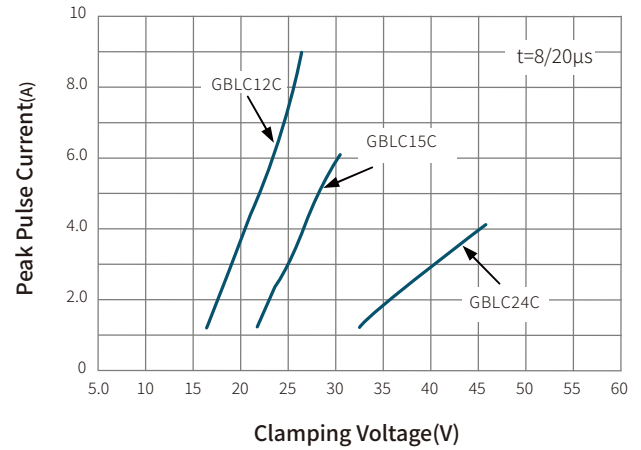
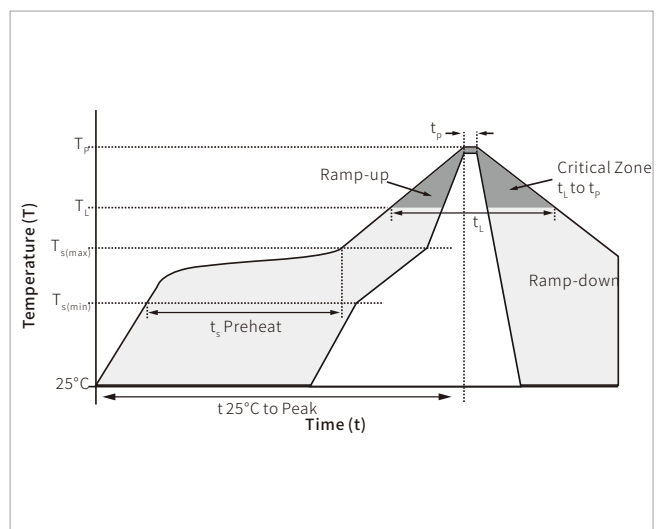


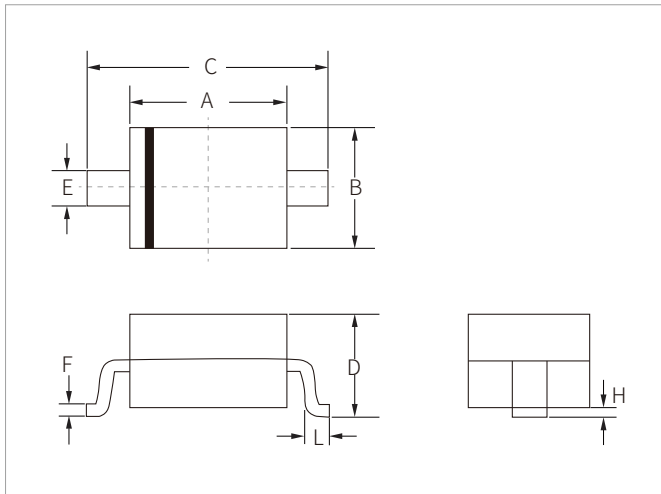
Fig 5 Clamping Voltage vs Peak Current

Fig 6 Clamping Voltage vs Peak Current


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

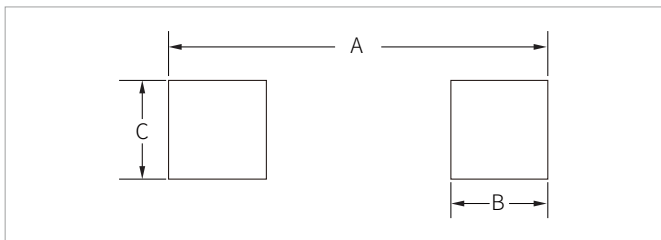


SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.35	2.75	0.093	0.108
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	0.40	0.008	0.016

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
GBLCxxC Series	SOD-323	3000PCS	7"

To find your local partner within Semiwell's website : www.semiwell.com

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