

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



SOD-323

APPLICATIONS

| Cell Phone Handsets and Accessories

| Microprocessor based equipment

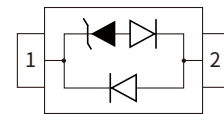
| Personal Digital Assistants (PDA' s)

| Notebooks, Desktops, and Servers

| Portable Instrumentation

| Peripherals

| USB Interface



Schematic Symbol

IEC COMPATIBILITY

| IEC61000-4-2 (ESD) ±8KV (Contact) ±15KV (Air)

| IEC61000-4-4 (EFT) 40A (5/50ns)

| IEC61000-4-5 (Lightning)

APPROVALS

RoHS Compliance with 2011/65/EU

HF Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Contact)	±8	KV
V_{ESD}	ESD per IEC 61000-4-2 (Air)	±15	KV
P_{PP}	Peak Pulse Power (8/20μs)	350	W
T_{OPT}	Operating Temperature	-55~+150	°C
T_{STG}	Storage Temperature	-55~+150	°C
T_L	Lead Soldering Temperature	260	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number	Marking	V _{RWM} (V)	V _B @1mA(V)	V _C @1A(V)	V _C @I _{PP} (V)		V _C @I _{PP} (V)		I _R (μA)	C _j (pF)
		Max.	Min.	Max.	Max.	I _{PP} (A)	Max.	I _{PP} (A)	Max.	Typ.
GBLC03I	C	3.3	4	7	13.9	8	20	20	5	0.8
GBLC05I	A	5.0	6	9.8	18.3	8	20	18	1	0.8
GBLC08I	B	8.0	8.5	13.4	18.5	8	24	18	1	0.8
GBLC12I	D	12	13.3	19	24	6	28.6	12	1	0.8
GBLC15I	E	15	16.7	24	29	5	31.8	10	1	0.8
GBLC24I	H	24	26.7	43	45	3	56	6	1	0.8

CHARACTERISTIC CURVES

Figure1: Pulse Waveform

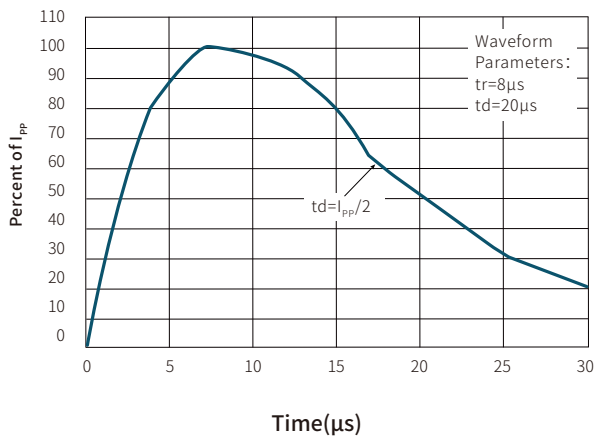


Figure2: Non-Repetitive Peak Pulse Power vs. Pulse Time

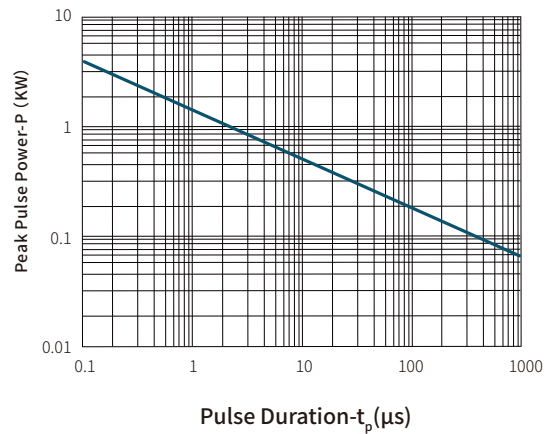
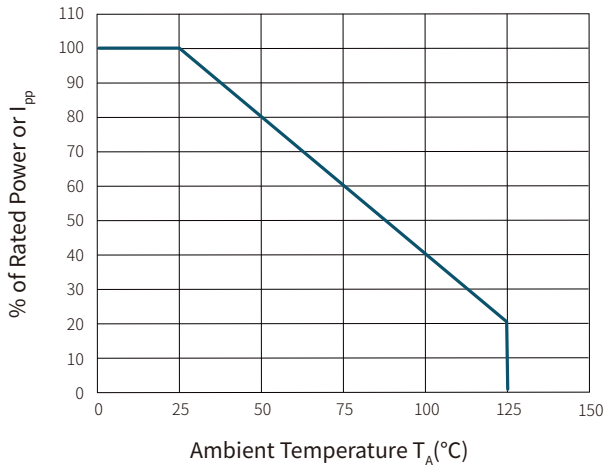
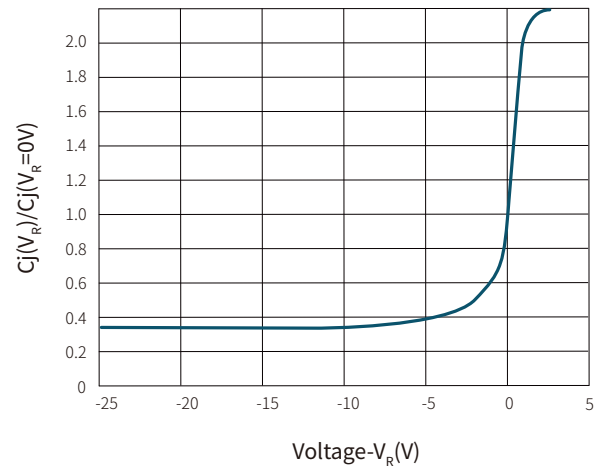
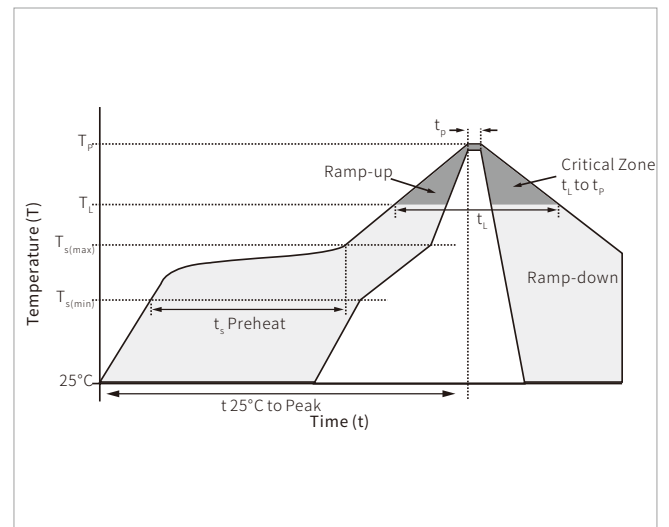


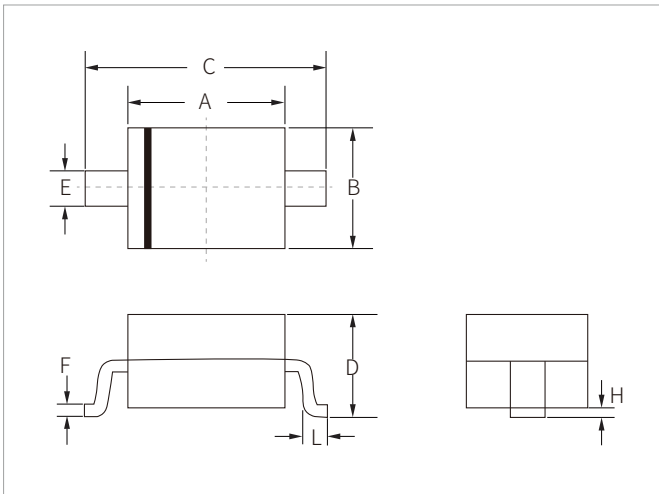
Figure3: Power Derating Curve

Figure4: Junction Capacitance vs. Reverse Voltage


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

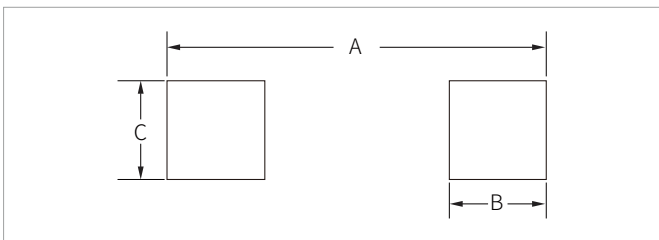


SOD-323 PACKAGE INFORMATION



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
GBLC03I-GBLC24I	SOD-323	3000PCS	7"

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