

# Low Profile SMD Bridge Rectifiers

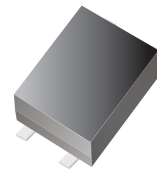


## CGRHD101-G Thru. CGRHD107-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 A

RoHS Device

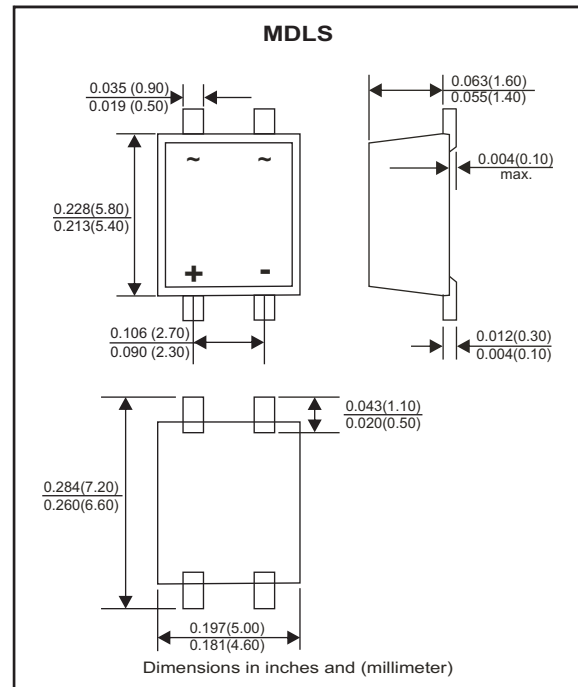


### Features

- Surge overload ratings to 35 amperes peak.
- 1.0A rating in low profile surface mount min-dip bridge save space on printed circuit board.
- Ideal for automated replacement.
- Glass passivated chip junctions.
- UL recognized file # E321971

### Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic low profile SMD mini-dip(MDLS), Bridge case
- Terminals: solderable per MIL-STD-750,method 2026.
- Polarity: Marking on body.
- Mounting Position: Any
- weight: 0.10 grams (approx.).



### Maximum Rating And Electrical Characteristics

Rating at TA=25°C, unless otherwise noted.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Parameter	Symbol	CGRHD 101-G	CGRHD 102-G	CGRHD 103-G	CGRHD 104-G	CGRHD 105-G	CGRHD 106-G	CGRHD 107-G	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum Continuous Reverse Voltage	V <sub>R</sub>	50	100	200	400	600	800	1000	V
Maximum Forward Rectified Current	I <sub>(AV)</sub>	1.0							A
Peak Forward Surge Current 8.3mS single half sine-wave, superimposed on rate load(JEDEC Method)	I <sub>FSM</sub>	35							A
Maximum Forward Voltage	at I <sub>F</sub> =0.5A	V <sub>F</sub>							V
	at I <sub>F</sub> =1.0A	V <sub>F</sub>							
Maximum Reverse Current	@V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =25°C	I <sub>R</sub>							μA
	@V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =100°C	I <sub>R</sub>							
Typical Thermal Resistance	Junction to ambient,note 1	R <sub>θJA</sub>							°C/W
	Junction to lead	R <sub>θJL</sub>							
Typical Junction Capacitance (Per leg, note 2)	C <sub>J</sub>	25							pF
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +175							°C

Notes: 1. Thermal resistance from Junction to Ambient and from junctionto lead mounted on glass epoxy P.C.B 0.8\*0.8(20\*20mm) copper pad.  
2. Measure at 1.0 MHz and applied reverse voltage of 4.0 volts.

## RATING AND CHARACTERISTIC CURVES (CGRHD101-G thru CGRHD107-G)

Fig.1 - Forward Current Derating Curve

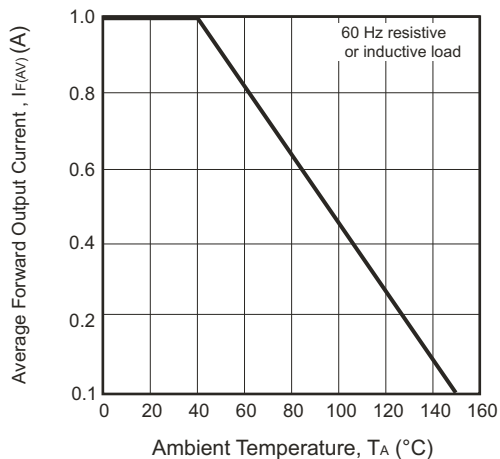


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

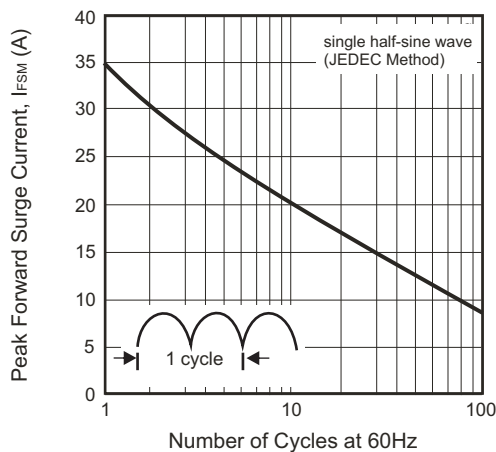


Fig.3 - Typical Instantaneous Forward Characteristics (Per Leg)

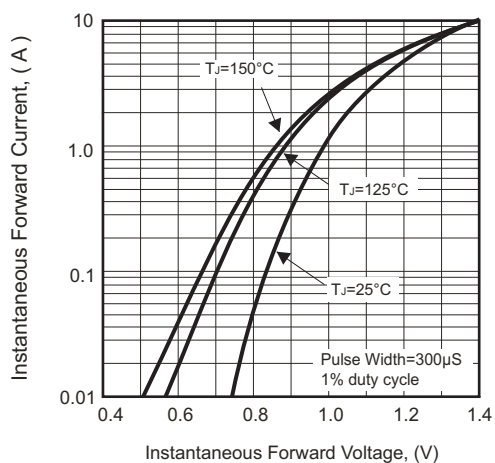


Fig.4 - Typical Reverse Characteristics (Per Leg)

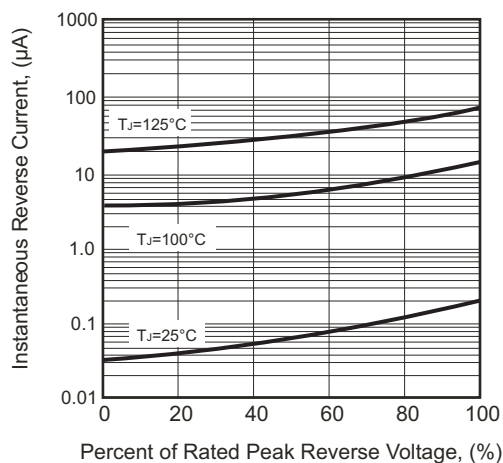
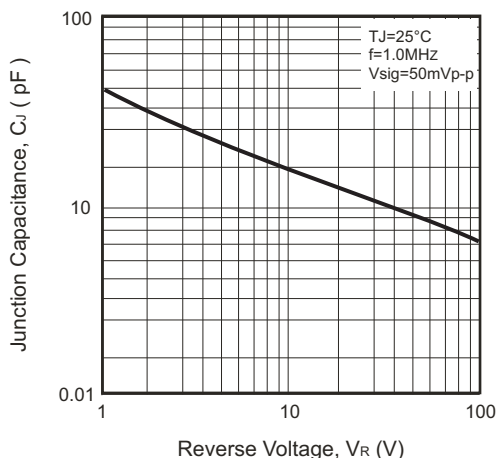
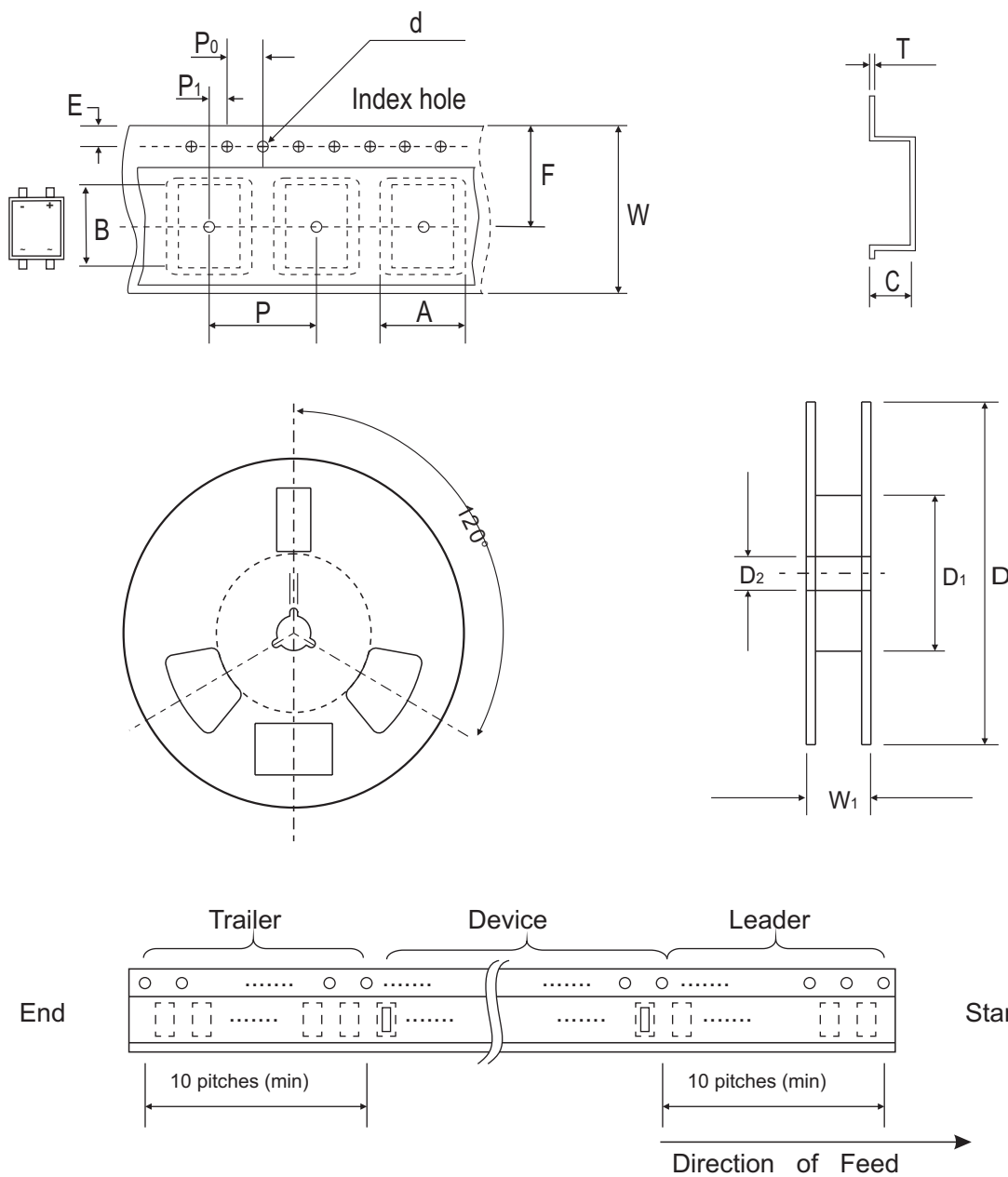


Fig.5 - Typical Junction Capacitance (Per Leg)



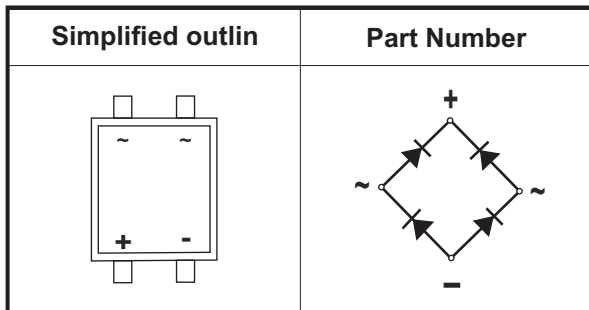
## Reel Taping Specification



MDLS	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	5.05 ± 0.10	7.01 ± 0.10	1.70 ± 0.10	1.50 ± 0.05	330 ± 1.50	75.00 ± 1.00	13.50 ± 0.50
	(inch)	0.199 ± 0.004	0.276 ± 0.004	0.067 ± 0.004	0.059 ± 0.002	12.99 ± 0.059	2.95 ± 0.039	0.531 ± 0.020

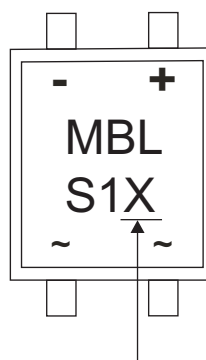
MDLS	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.25	12.0 ± 0.15	13.5 ± 0.50
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.010	0.472 ± 0.006	0.531 ± 0.020

## Pinning information



## Marking Code

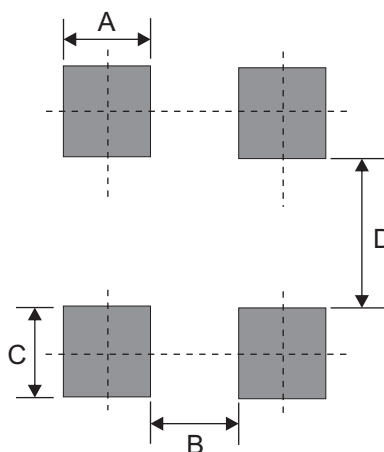
Part Number	Marking code
CGRHD101-G	MBLS1A
CGRHD102-G	MBLS1B
CGRHD103-G	MBLS1D
CGRHD104-G	MBLS1G
CGRHD105-G	MBLS1J
CGRHD106-G	MBLS1K
CGRHD107-G	MBLS1M



X = Product type marking code

## Suggested PAD Layout

SIZE	MDLS	
	(mm)	(inch)
A	1.50	0.059
B	1.20	0.047
C	1.20	0.047
D	5.40	0.213



## Standard Packaging

Case Type	Reel	
	Qty Per Reel	Reel Size
	(Pcs)	(inch)
MDLS	5,000	13