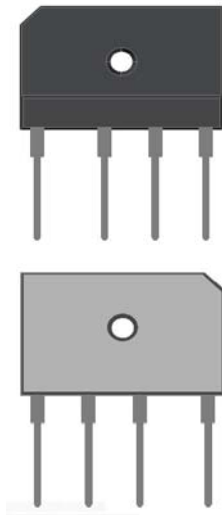


## Bridge Rectifiers



### Features

- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Mechanical Data

- **Package:** PB  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	YG50DD160	
Device marking code			YG50DD160	
Maximum Repetitive Peak Reverse Voltage	VRRM	V	1600	
Maximum RMS Voltage	VRMS	V	1120	
Maximum DC blocking Voltage	VDC	V	1600	
Average rectified output current @60Hz sine wave, R-load	With heatsink T <sub>c</sub> =100°C	I <sub>o</sub>	A	50*2
	Without heatsink T <sub>a</sub> =25°C			15*2
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C	I <sub>FSM</sub>	A	600	
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25°C			1200	
Current squared time @1ms≤t≤8.3ms T <sub>j</sub> =25°C	I <sup>2</sup> t	A <sup>2</sup> s	1494	
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150	
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150	
Dielectric strength @ Terminals to case, AC 1 minute	V <sub>dis</sub>	KV	2.5	
Mounting torque @Recommend torque: 5kg·cm	Tor	kg·cm	8	

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	YG50DD160
Maximum instantaneous forward voltage	V <sub>F</sub>	V	I <sub>FM</sub> =25A	1.05
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	5
			T <sub>j</sub> =125°C	1000



# YG50DD160

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	YG50DD160
Thermal Resistance	Between junction and ambient, Without heatsink	R <sub>θJ-A</sub>	°C/W	18.0
	Between junction and lead, With heatsink	R <sub>θJ-L</sub>		5.0
	Between junction and case, With heatsink	R <sub>θJ-C</sub>		0.75

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YG50DD160	B1	Approximate 7.5	15	750	1500	TUBE

## ■ Characteristics (Typical)

FIG1: I<sub>o</sub>-T<sub>c</sub> Curve

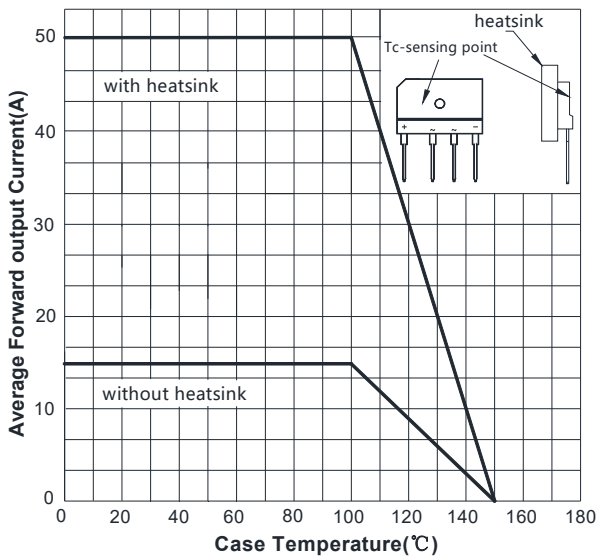


FIG2: Surge Forward Current Capability

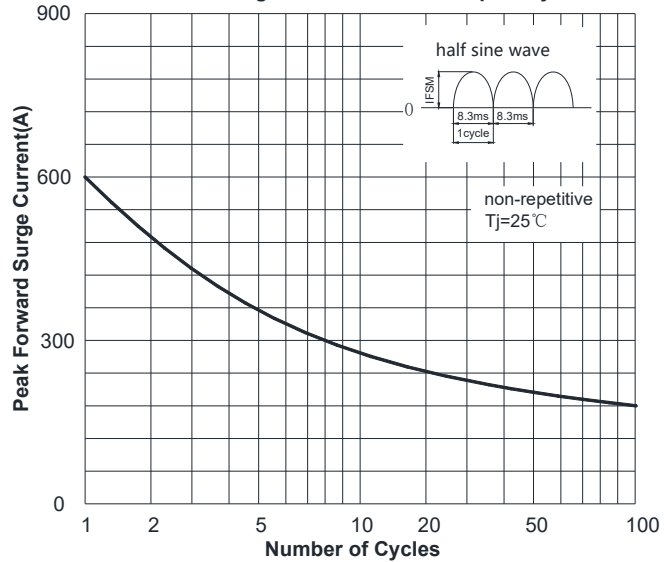


FIG3: Typical Forward Voltage

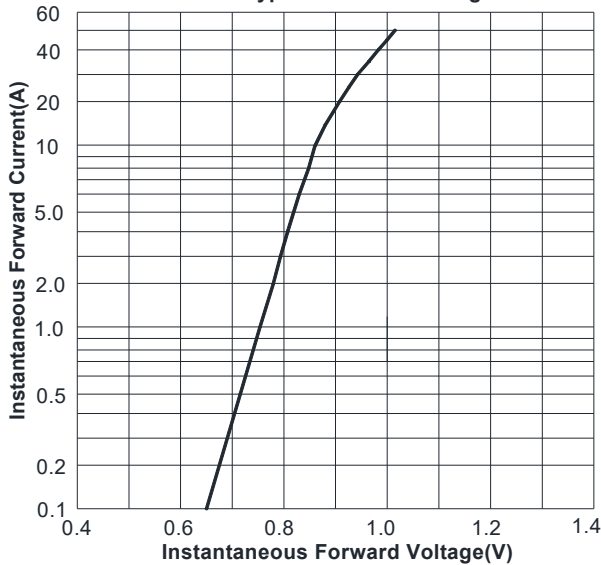
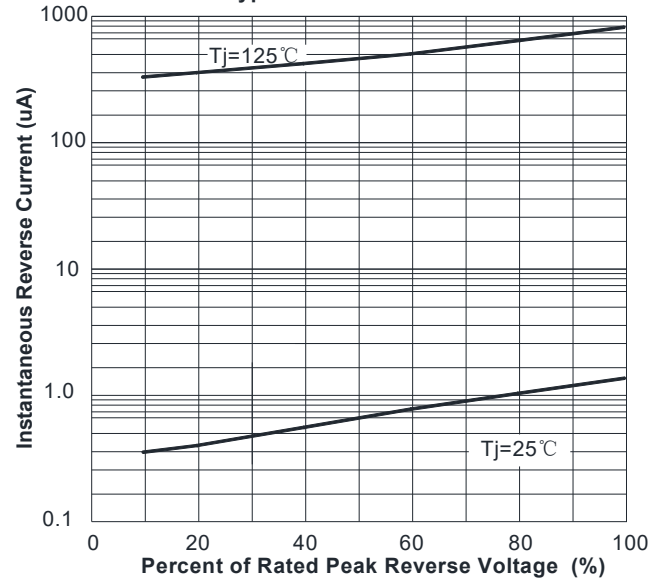


FIG4: Typical Reverse Characteristics

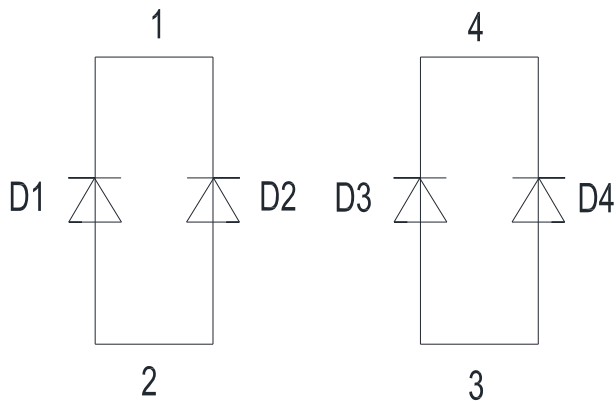




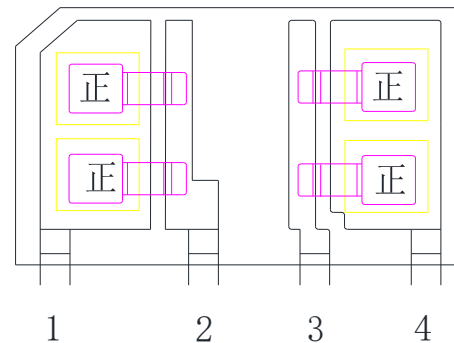
# YG50DD160

## ■ Electrical circuit diagram and structural diagram

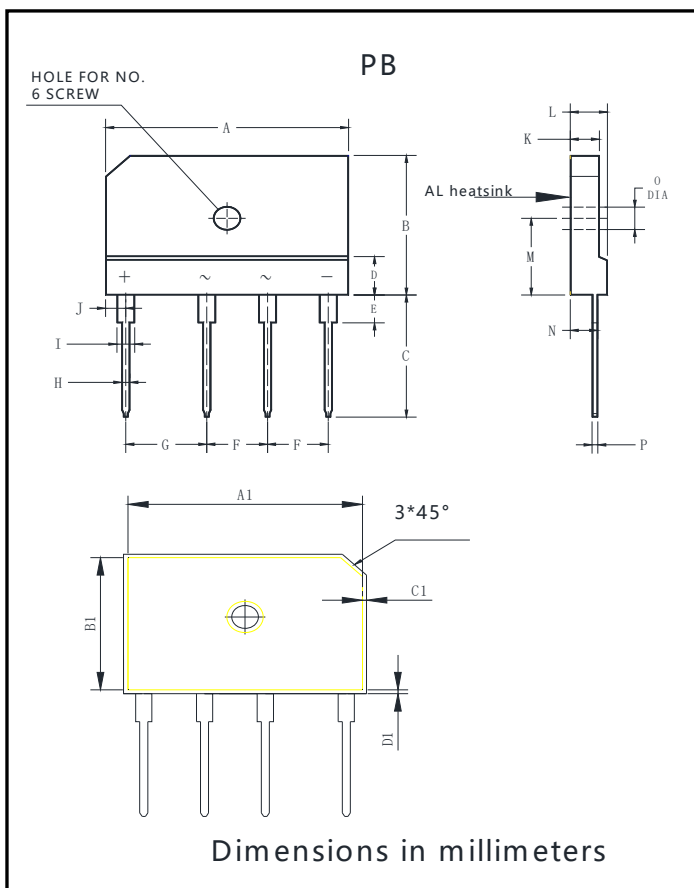
Electrical circuit diagram



Structural diagram



## ■ Outline Dimensions



PB		
Dim	Min	Max
A	29.7	30.3
B	19.7	20.3
C	17.0	18.0
D	4.8	5.8
E	3.8	4.2
F	7.3	7.7
G	9.8	10.2
H	0.9	1.1
I	2.0	2.4
J	2.3	2.7
K	3.4	3.8
L	4.4	4.8
M	10.8	11.2
N	3.1	3.7
O	3.1	3.4
P	0.6	0.8
A1	28.75	29.15
B1	18.75	19.15
C1	0.3	0.7
D1	0.3	0.7



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