

# RECTIFIER ASSEMBLIES

688 SERIES

High Voltage Stacks,  
Standard and Fast Recovery

3

## FEATURES

- PIV: from 10kV to 25kV
- Surge Ratings of 20A
- Recovery Time Available, to 500ns
- Current Ratings: to 0.6A
- Bonded Plate for Maximum Heat Transfer
- Controlled Avalanche Characteristics
- Only Fused-in Glass Diodes Used

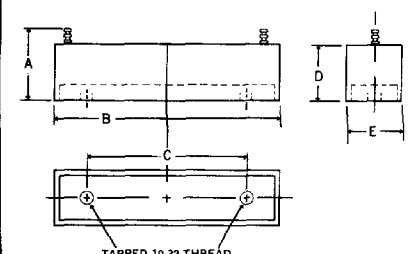
## DESCRIPTION

This series of high power stacks has a unique packaging design that provides characteristics not obtainable in conventional molded epoxy packages. This series, therefore, is ideally suited for high-voltage, high-power applications.

## ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage .....	10kV to 25kV
Maximum Average D.C. Output Current .....	See Electrical Specifications
Non-repetitive Sinusoidal Surge (8.3ms) .....	20A
Operating and Storage Temperature Range, $T_C$ .....	-65°C to +150°C
Thermal Resistance Junction to Ambient .....	25°C/W
Junction to Case .....	10°C/W

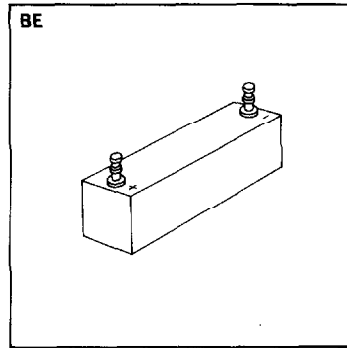
## MECHANICAL SPECIFICATIONS



**688 SERIES**

	ins.	mm.
A	1.140 MAX.	28.96 MAX.
B	2.985-3.015	75.82-76.58
C	2.110-2.140	53.69-54.36
D	.740-.770	18.80-19.56
E	.720-.760	18.29-19.05

Add suffix R to denote Fast Recovery version. For example, for recovery time,  $t_r = 500ns$ ; order 688-10R.



## MARKING

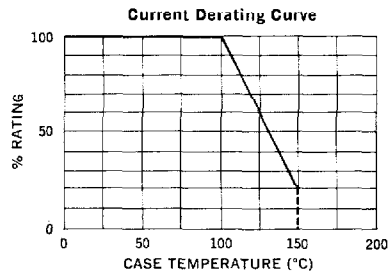
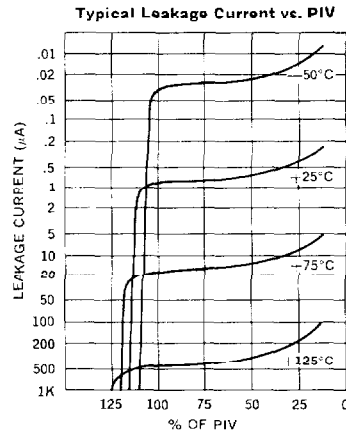
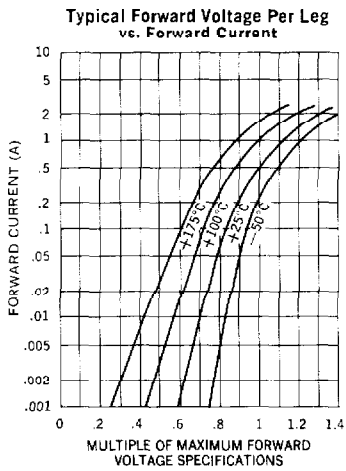
Cathode — Positive Output	+
Anode — Negative	-

Part number is printed on the body.

**Microsemi Corp.**  
**Watertown**  
*The diode experts*

Electrical Specifications (at 25°C unless noted)				Maximum Ratings	
Type	PIV kV	Maximum Forward Voltage Drop	Maximum Leakage Current @ PIV		Maximum Average D.C. Output Current
			T <sub>A</sub> = 25°C μA	T <sub>A</sub> = 100°C μA	T <sub>C</sub> = 100°C Amps
Standard	688-10	17V @ 0.4A	2	100	0.60
And Fast Recovery*	688-12	20V @ 0.4A			0.50
	688-15	25V @ 0.4A			0.40
	688-18	30V @ 0.4A			0.35
	688-20	34V @ 0.4A			0.30
	688-25	42V @ 0.4A			0.20

\*Add suffix R to denote Fast Recovery version.





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