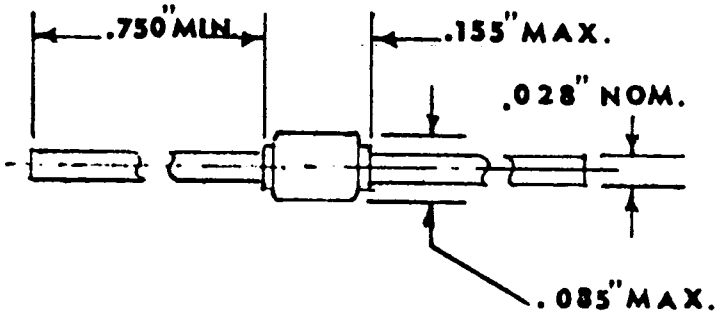
MICROSEMICONDUCTOR CORPORATION
[illegible] PLAYA COURT • CULVER CITY, CALIFORNIA
TELEPHONE (213) [illegible] • TWX 910-595-2509

MB244

BULLETIN 210
MICRO SIZE
MACRO RELIABILITY

1.667 Ampere Micro Glass Ultra Fast Rectifiers

The MB200 series of devices was designed for microcircuitry or space limited applications requiring the fast switching of high current loads. Microminiature hermetic sealed glass construction combined with a whiskerless contact to glass passivated silicon dice afford the ultimate in device reliability. Units meet or exceed environmental requirements of MIL-S-19500 and MIL-STD-750. Ultra reliability processing available upon request.



Maximum Ratings:

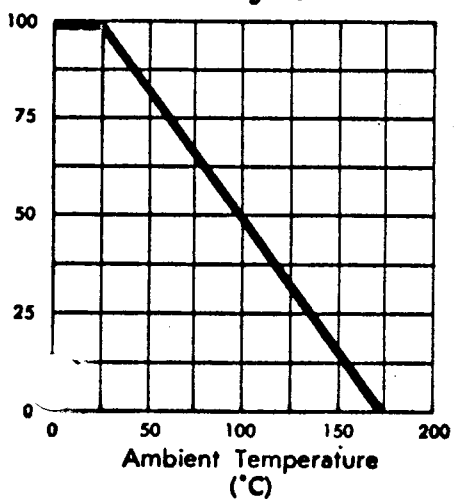
Operating Temperature	-65° C to +175° C
Storage Temperature	-65° C to +200° C
Power Dissipation	1.667 Watts @ 25° C

. Lead material: tinned copper. Silver and dumet are available upon request. Dumet leads will reduce current handling capability by 25 %.

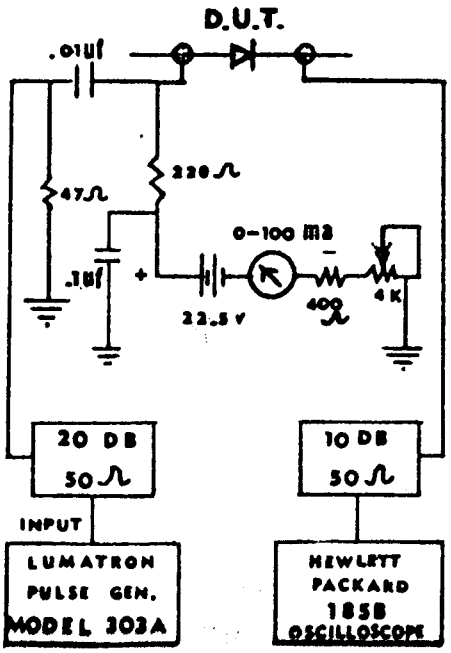
Marking: Standard EIA color code from cathode end of body

This rating applies when diodes are mounted on turret terminals (.060" diameter x .375" minimum height) on .5" centers with fan cooling of at least 250 linear feet per minute air velocity.

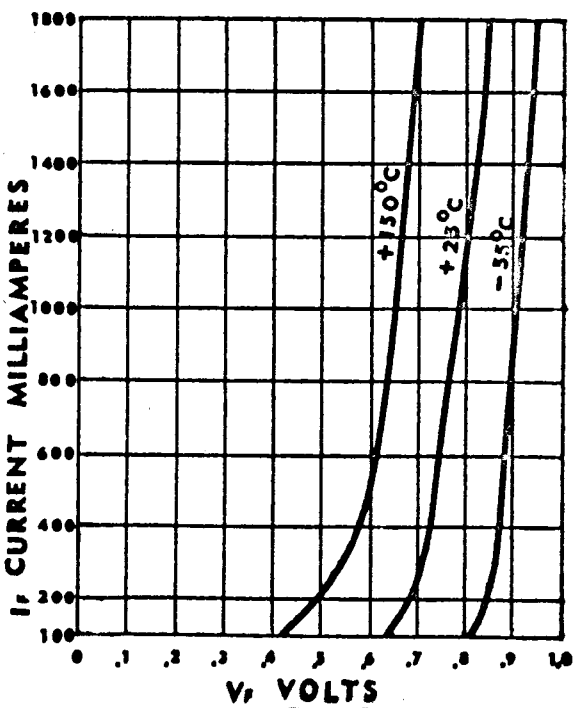
Temperature Derating Curve



Recovery Test Circuit



Forward Conductance Curve**



ELECTRICAL CHARACTERISTICS @ 25°C (UNLESS OTHERWISE NOTED)

MSC Type	PIV @ 100 μA (volts)	Reverse Current @ Indicated Voltage (μAdc) 25° C	100° C	Reverse Recovery Time * (nsec)	Minimum Forward Current @ 25° C @ + 1V (Amps)	Capacitance @ 0 V (pf)	Capacitance @ -10 V (pf)	Maximum 1 Cycle Surge Current (Amps)
MB200	55	.5 @ 40V	100 @ 40V	20	1.667	25	15	25
MB201	85	.5 @ 65V	100 @ 65V	20	1.667	25	15	25
MB202	110	.5 @ 90V	100 @ 90V	20	1.667	25	15	25
MB203	140	.5 @ 110V	100 @ 110V	20	1.667	25	15	25
MB204	165	.5 @ 135V	100 @ 135V	20	1.667	25	15	25
MB205	190	1.0 @ 160V	150 @ 160V	20	1.667	25	15	25
MB206	215	1.5 @ 185V	200 @ 185V	20	1.667	25	15	25
MB207	55	1.0 @ 40V	200 @ 40V	20	1.25	25	15	25
MB208	85	1.0 @ 65V	200 @ 65V	20	1.25	25	15	25
MB209	110	1.0 @ 90V	200 @ 90V	20	1.25	25	15	25
MB210	140	1.0 @ 110V	200 @ 110V	20	1.25	25	15	25
MB211	165	1.0 @ 135V	200 @ 135V	20	1.25	25	15	25
MB212	190	2.0 @ 160V	300 @ 160V	20	1.25	25	15	25
MB213	215	3.0 @ 185V	400 @ 185V	20	1.25	25	15	25

* T_{rr} is measured in a reverse recovery circuit switching from 10 mA forward current to 10 mA reverse, recovering to 5 mA

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BULLETIN 400
MICRO SIZE
MACRO RELIABILITY

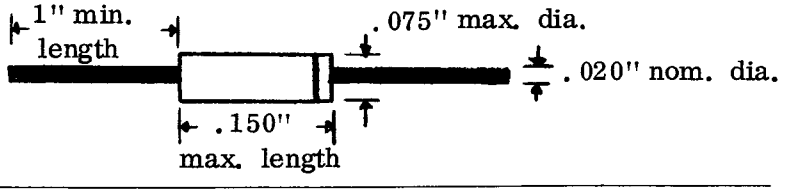
MINI-MICRO MULTIPLIER RECTIFIERS

This series of high voltage rectifiers was developed for application in advanced state-of-the-art converter-multiplier technology affording high efficiency, densely packaged rugged power supplies. Devices are ideally suited to Cockcroft-Walton cascade multiplier design. High voltage combined with low leakage, capacitance and forward voltage drop device parameters, all available in small size, are optimized in this device design. Devices are designed for maximum reliability in Military and Aerospace environments including MIL-S-19500 specifications.

ELECTRICAL CHARACTERISTICS

MSC Type	PIV	Average Rectified Current @ 25° C (mA)	Reverse Current @ PIV (μA) 25° C	Reverse Current @ PIV (μA) 100° C	Forward Voltage @ 10 mA (volts)	Capacitance @ 0 V (pf)
MH400	1000	10	0.5	20.0	1.2	
MH401	1500	10	0.5	20.0	2.4	
MH402	2000	10	0.5	20.0	2.8	
MH403	2500	10	0.5	20.0	3.0	
MH404	3000	5	0.020	1.0	6.0	1
MH405	3000	10	0.5	20.0	3.2	
MH406	3500	5	0.020	1.0	6.0	1
MH407	3500	10	0.5	20.0	4.5	
MH408	4000	5	0.020	1.0	6.0	1
MH409	4000	10	0.5	20.0	4.5	
MH410	5000	5	0.020	2.0	6.0	1
MH411	5000	10	0.5	20.0	4.5	
MH412	6000	10	0.5	50.0	7.0	

MECHANICAL OUTLINE



Leads: Dumet standard (lead finish optional)
Other lead material available upon request

Marking: Standard EIA color code cathode end of body

- over -

TYPICAL APPLICATIONS:

- UV Electronic Scanning Detectors
- IR Electronic Scanning Detectors
- UV and IR Photometers
- UV and IR Spectrometers
- Electro-Optical Imaging Systems
- IR Search and Tracking Systems
- Laser Systems
- Specialized Television
- Display Systems
- Industrial Flaw Inspectors
- Special Purpose Phototubes
- Star Tracking Photomultipliers
- Storage Cathode Ray Tubes