

# 2KBP005M/3N253 - 2KBP10M/3N259

## Bridge Rectifiers

### Features

- Surge overload rating: 60 amperes peak.
- Reliable low cost construction utilizing molded plastic technique.
- UL certified, UL #E111753.



### Absolute Maximum Ratings \* T<sub>a</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		005M	01M	02M	04M	06M	08M	10M	
		253	254	255	256	257	258	259	
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
V <sub>RMS</sub>	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
V <sub>R</sub>	DC Reverse Voltage (Rated V <sub>R</sub> )	50	100	200	400	600	800	1000	V
I <sub>F(AV)</sub>	Average Rectified Forward Current, @ T <sub>A</sub> = 50°C	2.0							A
I <sub>FSM</sub>	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	60							A
T <sub>STG</sub>	Storage Temperature Range	-55 to +150							°C
T <sub>J</sub>	Junction Temperature	-55 to +150							°C

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics

Symbol	Parameter	Value	Units
P <sub>D</sub>	Power Dissipation	4.7	W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient, * per leg	18	°C/W

\* Device mounted on PCB with 0.47 × 0.47" (12 × 12mm).

### Electrical Characteristics T<sub>C</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>F</sub>	Forward Voltage, per element @ 3.14A	1.1	V
I <sub>R</sub>	Reverse Current, per element @ Rated V <sub>R</sub> T <sub>A</sub> = 25°C T <sub>A</sub> = 125°C	50 500	μA μA
	I <sup>2</sup> t Rating for Fusing t < 8.35ms	15	A <sup>2</sup> s
C <sub>T</sub>	Total Capacitance, per leg V <sub>R</sub> = 4.0 V, f = 1.0 MHz	25	pF

### Typical Performance Characteristics

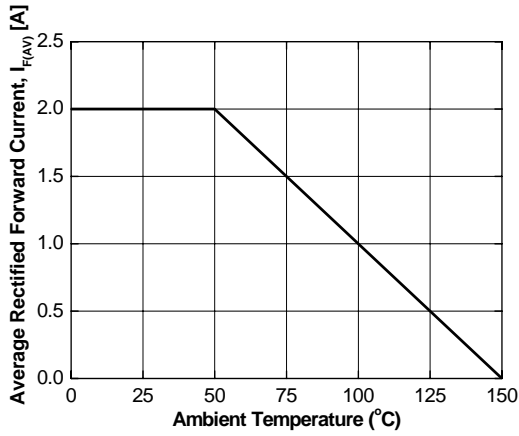


Figure 1. Forward Current Derating Curve

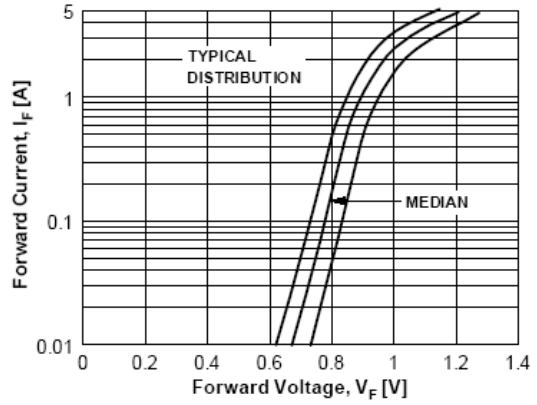


Figure 2. Forward Voltage Characteristics

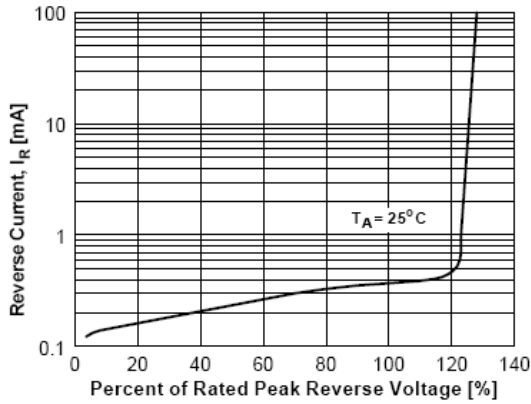


Figure 3. Reverse Current vs Reverse Voltage

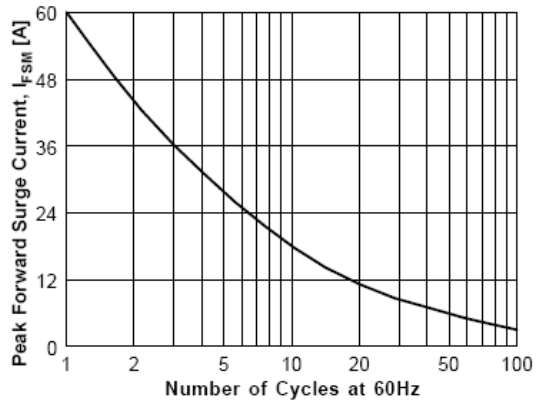


Figure 4. Non-Repetitive Surge Current

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E <sup>2</sup> C MOS™	i-Lo™	OCX™	µSerDes™	UltraFET®
EnSigna™	ImpliedDisconnect™	OCXPro™	ScalarPump™	UniFET™
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FACT Quiet Series™		OPTOPLANAR™	SMART START™	Wire™
		PACMAN™	SPM™	
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Programmable Active Droop™		PowerEdge™	SuperSOT™-3	

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