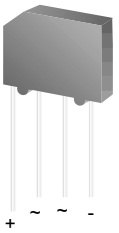
FAIRCHILD SEMICONDUCTOR®

2KBP005M/3N253 - 2KBP10M/3N259

Features

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



KBPM

Bridge Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		005M	01M	02M	04M	06M	08M	10M	
		253	254	255	256	257	258	259	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
V_R	DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ T_A = 50°C	2.0							A
I_{FSM}	Non-repetitive Peak Forward Surge Current	60							A
T_{stg}	Storage Temperature Range	-55 to +165							°C
T_J	Operating Junction Temperature	-55 to +165							°C

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

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	4.7	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient,* per leg	30	°C/W

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

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Device	Units
V_F	Forward Voltage, per bridge @ 3.14 A	1.1	V
I_R	Reverse Current, total bridge @ rated V_R T_A = 25°C T_A = 125°C	 5.0 500	 µA µA
	I^2t rating for fusing t < 8.35 ms	15	A^2s
C_T	Total Capacitance, per leg V_R = 4.0 V, f = 1.0 MHz	25	pF

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Typical Characteristics

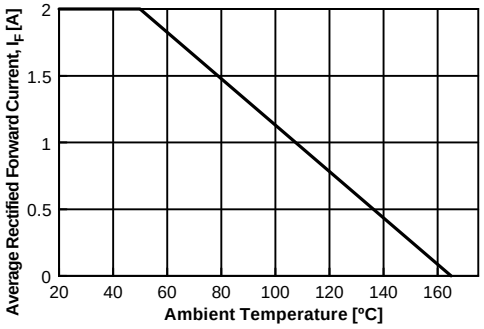


Figure 1. Forward Current Derating Curve

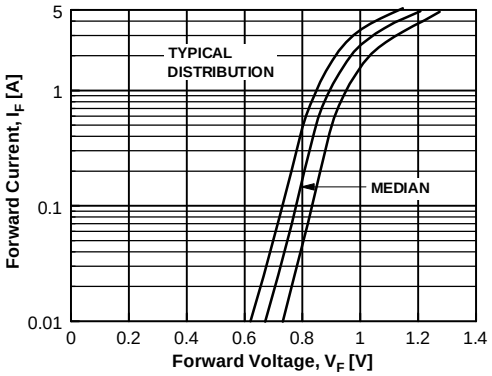


Figure 2. Forward Voltage Characteristics

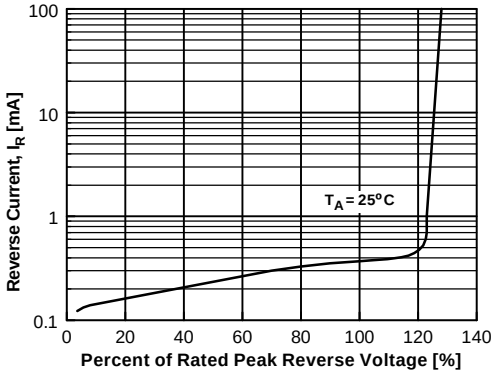


Figure 3. Reverse Current vs Reverse Voltage

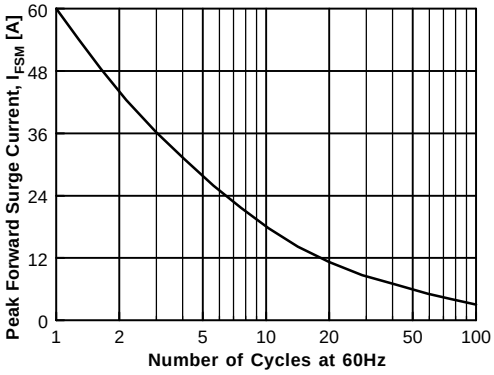


Figure 4. Non-Repetitive Surge Current

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CROSSVOLT™	GlobalOptoisolator™	POP™	SuperSOT™-3	
DenseTrench™	GTO™	Power247™	SuperSOT™-6	
DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
EcoSPARK™	ISOPLANAR™	QFET™	SyncFET™	
E^2CMOS™	LittleFET™	QS™	TinyLogic™	
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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