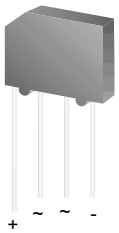
FAIRCHILD SEMICONDUCTOR®

KBP005M/3N246 - KBP10M/3N252

Features

- Surge overload rating: 50 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	
		246	247	248	249	250	251	252	
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	1.5							A
I_{FSM}	Non-repetitive Peak Forward Surge Current	50							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	3.5	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient,* per leg	40	°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 @ 1.0 A @ 3.14 A	1.0 1.3	V V
I_R	Reverse Current, total bridge @ rated V_R T_A = 25°C T_A = 100°C	 5.0 500	 µA µA
	I^2t rating for fusing t < 8.35 ms	10	A^2s
C_T	Total Capacitance, per leg V_R = 4.0 V, f = 1.0 MHz	15	pF

Typical Characteristics

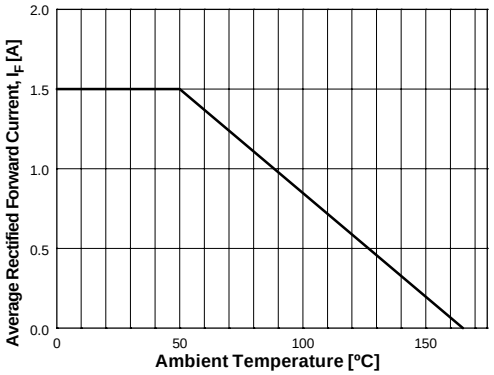


Figure 1. Forward Current Derating Curve

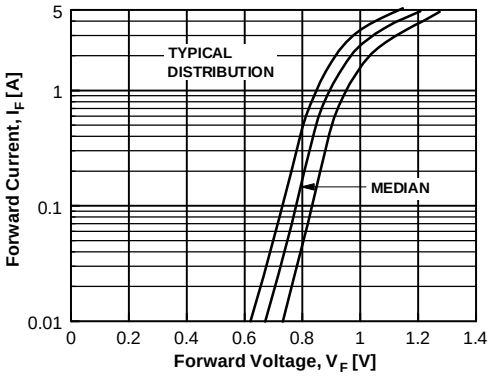


Figure 2. Forward Voltage Characteristics

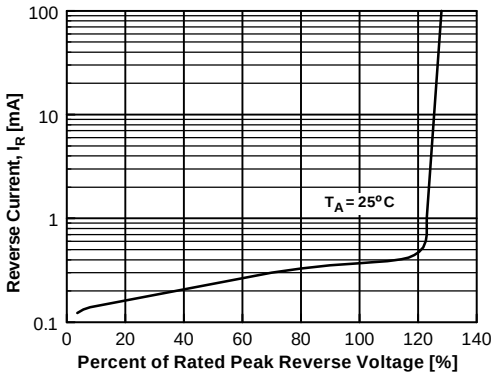


Figure 3. Reverse Current vs Reverse Voltage

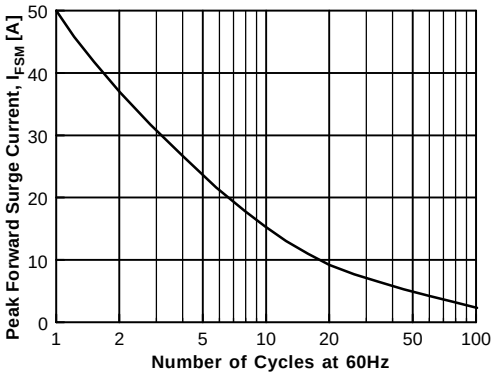


Figure 4. Non-Repetitive Surge Current

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