FAIRCHILD SEMICONDUCTOR®

May 2009

KBL005 - KBL10
Bridge Rectifiers

Features

- Ideal for printed circuit board .
- Reliable low cost construction.
- High surge current capability.
- UL certified, UL #E326243.

KBL

Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		005	01	02	04	06	08	10	
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 Recitified Forward Current, @ T_A = 50°C	4.0							A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	200							A
T_{STG}	Storage Temperature Range	-55 to +150							°C
T_J	Operating Junction Temperature	-55 to +150							°C

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

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	6.58	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient, * per leg	19	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead, * per leg	2.4	°C/W

* Device mounted on PCB with 0.375 " (9.5 mm) lead length and 0.5 x 0.5" (13 x 13 mm) copper pads.

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_F	Forward Voltage, per bridge @ 4.0A	1.1	V
I_R	Reverse Current, total bridge @ Rated V_R T_A = 25°C T_A = 100°C	 5.0 500	 µA µA

Typical Performance Characteristics

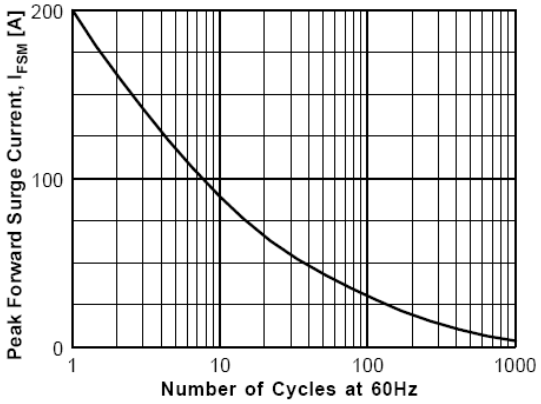

Figure 1. Non-Repetitive Surge Current

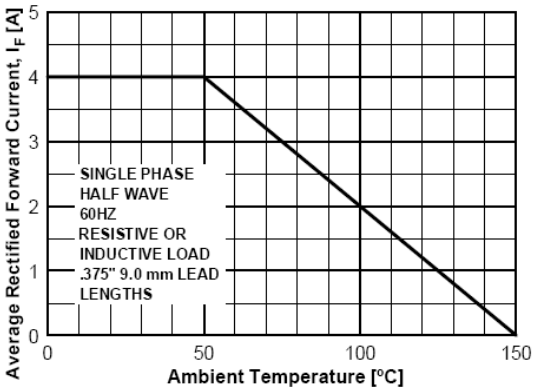

Figure 2. Forward Current Derating Curve

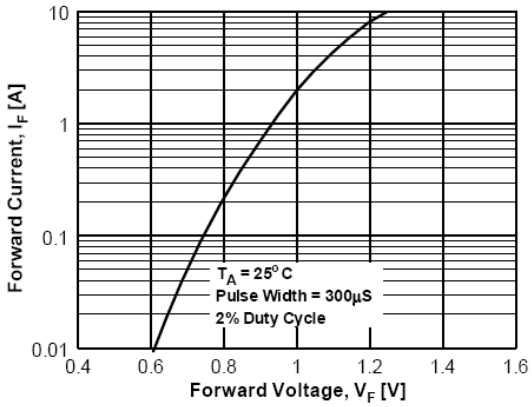

Figure 3. Forward Voltage Characteristics

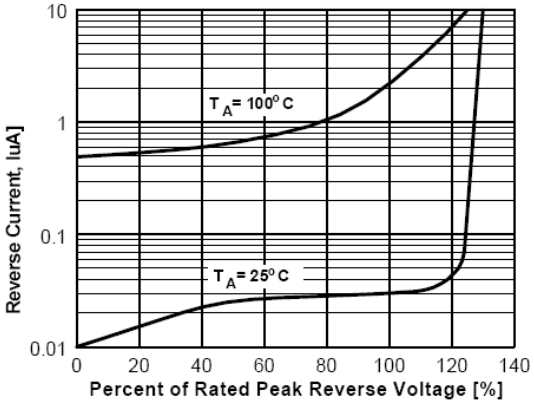

Figure 4. Reverse Current vs Reverse Voltage

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