

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

KBL4005-MS THRU KBL410-MS

Product specification

VOLTAGE RANGE: 50 - 1000V
CURRENT: 4.0 A

FEATURES

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

MECHANICAL DATA

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

REFERENCE NEWS



Marking

KBL4005-MS	KBL401-MS	KBL402-MS	KBL404-MS
KBL406-MS	KBL408-MS	KBL410-MS	

Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified
 Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	KBL 400-MS	KBL 401-MS	KBL 402-MS	KBL 404-MS	KBL 406-MS	KBL 408-MS	KBL 410-MS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_C = 75^\circ\text{C}$	I_O	4.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							A
Forward Voltage (per element) @ $I_F = 2.0\text{A}$	V_{FM}	1.1							V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 100^\circ\text{C}$	I_R	10 1.0							μA mA
Rating for Fusing ($t < 8.3\text{ms}$) (Note 1)	I^2t	166							A^2s
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	19							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125							$^\circ\text{C}$

Note:

1. Non-repetitive for $t > 1\text{ms}$ and $< 8.3\text{ms}$.
2. Thermal resistance junction to case per element mounted on PC board with 13.0x13.0x0.03mm thick land areas.

RATING AND CHARACTERISTIC CURVES (KBL400-MS THRU KBL410-MS)

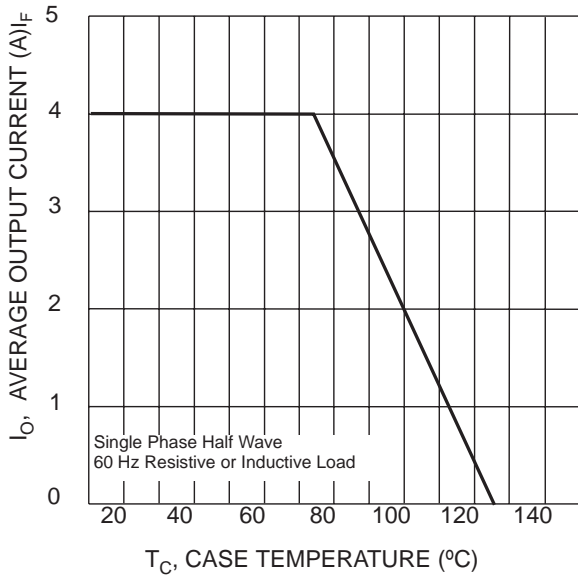


Fig. 1 Forward Current Derating Curve

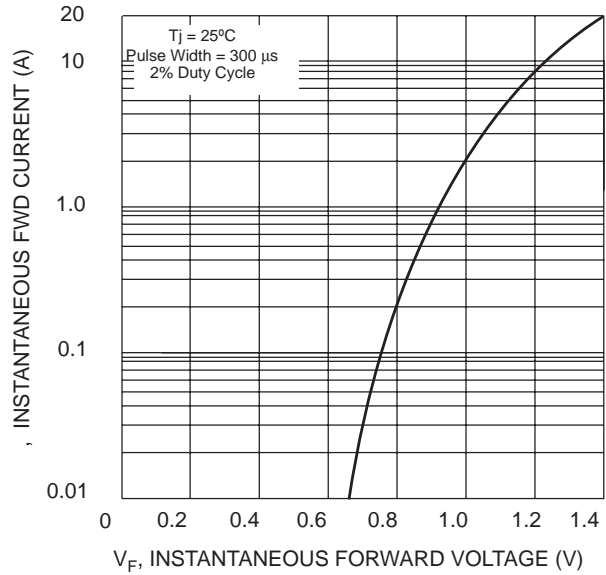


Fig. 2 Typical Forward Characteristics, per element

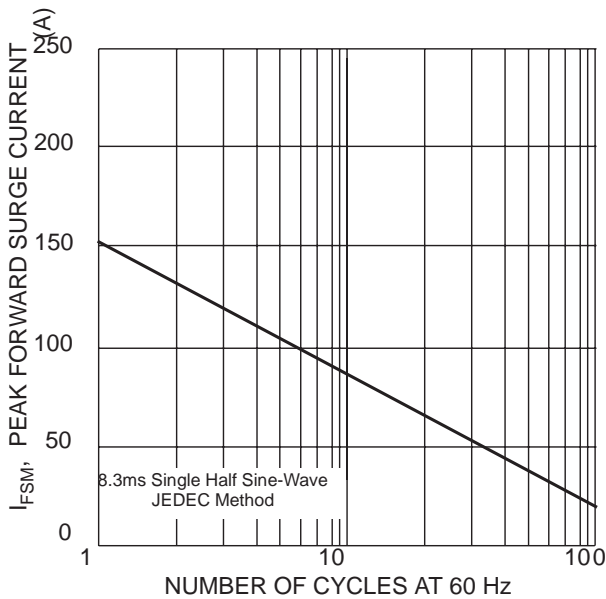


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

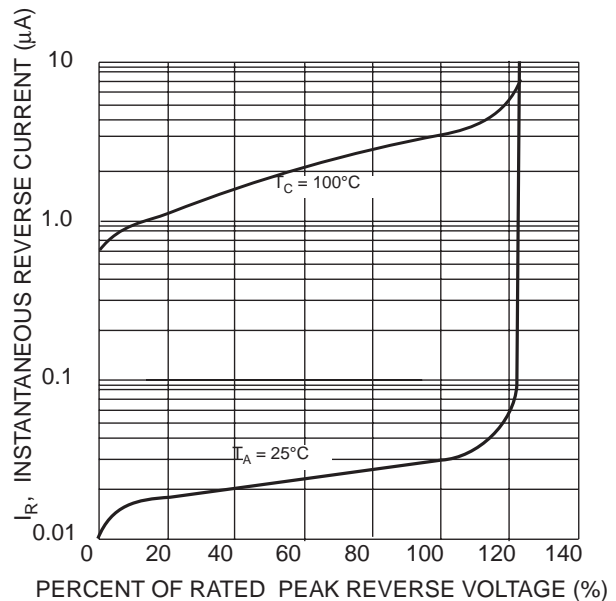
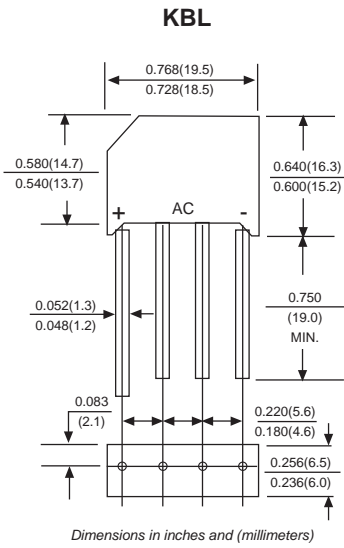


Fig. 4 Typical Reverse Characteristics, per element

PACKAGE MECHANICAL DATA



REEL SPECIFICATION

P/N	PKG	QTY
KBL4005-MS THRU KBL410-MS	KBL	500

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