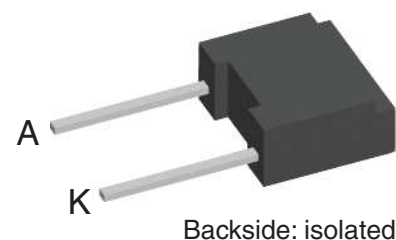


# Breakover Diode Gen<sup>2</sup> (BOD2)

 $V_{BO} = 400-1400 \text{ V}$   
 $I_{AVM} = 0.9 \text{ A}$ 

$V_{BO}$ [V]	Standard Types
400 ±50	IXBOD2-04
500 ±50	IXBOD2-05
600 ±50	IXBOD2-06
700 ±50	IXBOD2-07
800 ±50	IXBOD2-08
900 ±50	IXBOD2-09
1000 ±50	IXBOD2-10
1100 ±50	IXBOD2-11
1200 ±50	IXBOD2-12
1300 ±50	IXBOD2-13
1400 ±50	IXBOD2-14



### Features / Advantages:

- Extra fast turn-on
- Very low temperature dependence
- Very low leakage current

### Applications:

- High voltage circuit protection
- Transient voltage protection
- Trigger device
- Power pulse generators
- Lightning and arcing protection
- Energy discharge circuits
- Battery overvoltage protection
- Solar array protection

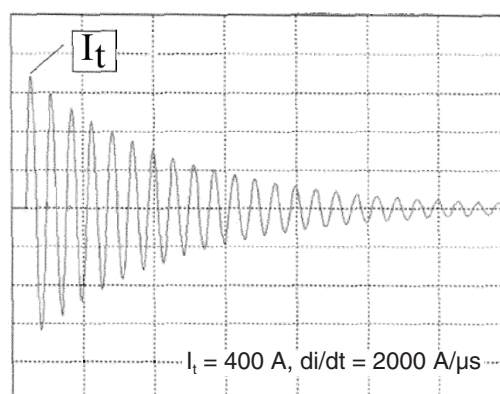
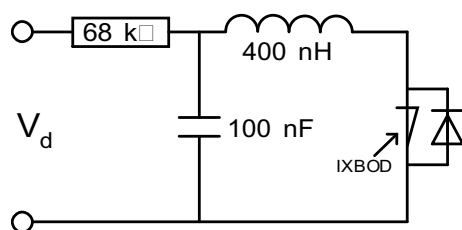
### Package: FP-Case

- Industry standard outline
- RoHS compliant
- Epoxy meets UL 94V-0
- Soldering pins for PCB mounting
- Base plate: Plastic overmolded tab
- Reduced weight

### Disclaimer Notice

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at [www.littelfuse.com/disclaimer-electronics](http://www.littelfuse.com/disclaimer-electronics).

BOD2			Ratings			
Symbol	Definitions	Conditions	min.	typ.	max.	
$I_D$	drain current	$V_D = 0.8 \cdot V_{BO}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$			10 200	$\mu\text{A}$ $\mu\text{A}$
$V_{BO}$	breakover voltage	$V_{BO}(T_{VJ}) = V_{BO, 25^\circ\text{C}} [1 + K_T (T_{VJ} - 25^\circ\text{C})]$				V
$I_{RMS}$	RMS current	$f = 50 \text{ Hz}$ pins soldered to printed circuit (conductor 0.035x2mm) $T_{amb} = 50^\circ\text{C}$			1.4	A
$I_{FAVM}$	maximum average forward current				0.9	A
$I_{SM}$	maximum pulsed source current	$t_p = 0.1 \text{ ms}$ ; non repetitive $T_{VJ} = 150^\circ\text{C}$			250	A
$I^2t$	$I^2t$ value for fusing	$t_p = 0.1 \text{ ms}$ $T_{VJ} = 150^\circ\text{C}$			3.1	$\text{A}^2\text{s}$
$K_T$	temperature coefficient of $V_{BO}$				$0.7 \cdot 10^{-3}$	$\text{K}^{-1}$
$K_P$	coefficient for energy per pulse EP (material constant)				700	K/Ws
$R_{thJA}$	thermal resistance junction to ambient	natural convection with air speed 2 m/s			60 45	K/W K/W
$I_{BO}$	breakover current				15 6	mA mA
$I_H$	holding current				20 12	mA mA
$V_H$	holding voltage		4		8	V
$(dv/dt)_{cr}$	critical rate of rise of voltage	$V_D = 0.9 \cdot V_{BO}$ $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			3000 1000	$\text{V}/\mu\text{s}$ $\text{V}/\mu\text{s}$
$(di/dt)_{cr}$	critical rate of rise of current	$I_T = 100 \text{ A}$ ; $V_D = V_{BO}$ ; $f = 50 \text{ Hz}$ $I_T = 600 \text{ A}$ ; non repetitive $T_{VJ} = 150^\circ\text{C}$			200 500	$\text{A}/\mu\text{s}$ $\text{A}/\mu\text{s}$
$t_q$	turn-off time	$V_D = 0.75 \cdot V_{BO}$ ; $V_R = 0 \text{ V}$ ; $I_T = 100 \text{ A}$ $dv/dt_{(lin.)} = 5000 \text{ V}/\mu\text{s}$ ; $di/dt = -500 \text{ A}/\mu\text{s}$ $T_{VJ} = 125^\circ\text{C}$		200		$\mu\text{s}$
$V_T$	forward voltage drop	$I_T = 10 \text{ A}$ $T_{VJ} = 125^\circ\text{C}$ $T_{VJ} = 150^\circ\text{C}$			1.3 1.2	V V
$V_{T0}$	threshold voltage	for power-loss calculation only $T_{VJ} = 150^\circ\text{C}$			0.75	V
$r_T$	slope resistance				0.05	$\Omega$



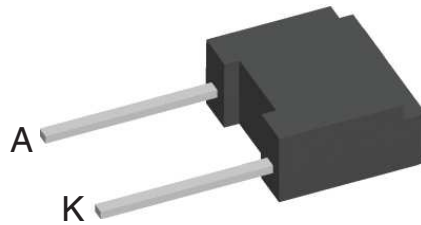
Package FP-Case			Ratings			
Symbol	Definitions	Conditions	min.	typ.	max.	
$T_{amb}$	ambient temperature (cooling medium)		-40		150	°C
$T_{stg}$	storage temperature		-40		150	°C
$T_{vJM}$	maximum virtual junction temperature		-40		150	°C
<b>Weight</b>				0.9		g

### Product Marking



Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Ordering Code
Standard	IXBOD2-04	IXBOD2-04	Box	100	511174
Standard	IXBOD2-05	IXBOD2-05	Box	100	tbd
Standard	IXBOD2-06	IXBOD2-06	Box	100	tbd
Standard	IXBOD2-07	IXBOD2-07	Box	100	508425
Standard	IXBOD2-08	IXBOD2-08	Box	100	507602
Standard	IXBOD2-09	IXBOD2-09	Box	100	511668
Standard	IXBOD2-10	IXBOD2-10	Box	100	508078
Standard	IXBOD2-11	IXBOD2-11	Box	100	511860
Standard	IXBOD2-12	IXBOD2-12	Box	100	511675
Standard	IXBOD2-13	IXBOD2-13	Box	100	511682
Standard	IXBOD2-14	IXBOD2-14	Box	100	509782

Outlines FP-case



Dimensions in mm  
(1 mm = 0.0394")

