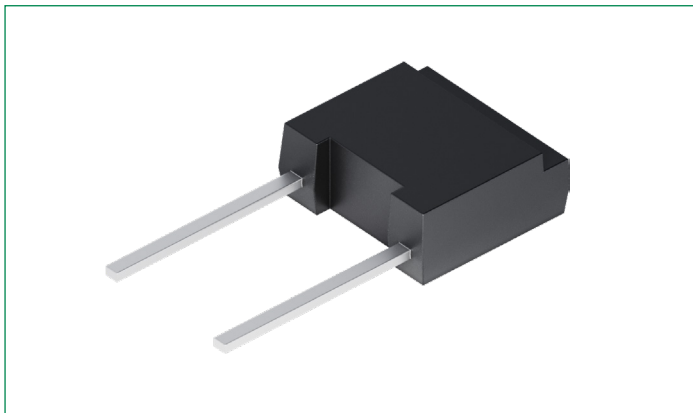


IXBOD2

Breakover Diode

RoHS



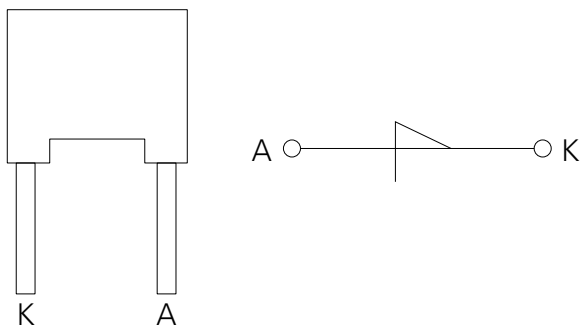
Features

- 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
- Energy discharge circuits
- Lightning and arcing protection
- Battery overvoltage protection
- Solar array protection

Pinout Diagram (FP-Case)



A: Anode; **K:** Cathode

Package

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

Product Summary

Part Number	V_{BO} (V)
IXBOD2-07	700 ±50
IXBOD2-08	800 ±50
IXBOD2-09	900 ±50
IXBOD2-10	1000 ±50
IXBOD2-11	1100 ±50
IXBOD2-12	1200 ±50

Electrical Characteristics

Symbol	Characteristics	Conditions	Value			Units	
			Min.	Typ.	Max.		
I_D	Off-state Current	$V_D = 0.8 * V_{BO}$	$T_{vj} = 25\text{ °C}$	–	–	0.2	μA
			$T_{vj} = 125\text{ °C}$	–	–	200	
V_{BO}	Breakover Voltage	$V_{BO}(T_{vj}) = V_{BO}, 25\text{ °C} [1 + K_T (T_{vj} - 25\text{ °C})]$	see Product Summary on Page 1			V	
I_{RMS}	RMS On-state Current	$f = 50\text{ Hz}$; $T_{amb} = 50\text{ °C}$ pins soldered to printed circuit (conductor 0.035 x 2mm)	–	–	1.4	A	
$I_{F(AVM)}$	Maximum Average Forward Current	–	–	–	0.9	A	
I_{SM}	Maximum Pulsed Source Current	$t_p = 0.1\text{ ms}$; rectangular, non repetitive $T_{vj} = 50\text{ °C}$	–	–	200	A	
I^2t	I^2t Value	$t_p = 0.1\text{ ms}$; $T_{vj} = 50\text{ °C}$	–	–	4	A^2s	
K_T	Temperature Coefficient of V_{BO}	–	–	–	$1 * 10^{-3}$	K^{-1}	
K_P	Coefficient for Energy per Pulse E_p (material constant)	–	–	–	700	K/Ws	
I_{BO}	Breakover Current	$T_{vj} = 25\text{ °C}$	–	–	20	mA	
I_H	Holding Current	$T_{vj} = 25\text{ °C}$	–	–	40	mA	
		$T_{vj} = 125\text{ °C}$	–	–	20	mA	
$dv/dt_{(cr)}$	Critical Rate of Rise of Off-state Voltage	$V_D = 0.9 \cdot V_{BO}$	$T_{vj} = 25\text{ °C}$	–	–	3000	$\text{V}/\mu\text{s}$
$di/dt_{(cr)}$	Critical Rate of Rise of On-state Current	$I_T = 100\text{ A}$; $V_D = V_{BO}$; $f = 50\text{ Hz}$	$T_{vj} = 150\text{ °C}$	–	–	150	$\text{A}/\mu\text{s}$
		$I_T = 600\text{ A}$; non repetitive		–	–	500	$\text{A}/\mu\text{s}$
t_q	Turn-off Time	$V_D = 0.75 \cdot V_{BO}$; $V_R = 0\text{ V}$; $I_T = 100\text{ A}$; $T_{vj} = 125\text{ °C}$; $dv/dt(\text{lin.}) = 5000\text{ V}/\mu\text{s}$; $di/dt = -500\text{ A}/\mu\text{s}$		–	200	–	μs
V_T	On-state Voltage	$T_{vj} = 25\text{ °C}$	$I_T = 5\text{ A}$	–	–	1.3	V
		$T_{vj} = 150\text{ °C}$		–	–	1.2	
V_{TO}	Threshold Voltage	$T_{vj} = 150\text{ °C}$		–	–	0.9	V
r_T	Slope Resistance	$T_{vj} = 150\text{ °C}$		–	–	80	$\text{m}\Omega$
T_{vj}	Virtual Junction Temperature Range	–		–40 to +150		°C	
T_{amb}	Ambient Temperature Range (cooling medium)	–		–40 to +125		°C	
T_{stg}	Storage Temperature Range	–		–40 to +150		°C	

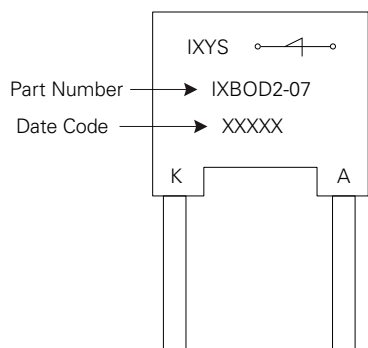
Thermal Specifications and Package

Symbol	Characteristics		Value			Unit
			Min.	Typ.	Max.	
$R_{th(j-a)}$	Thermal Resistance, Junction to Ambient	natural convection	–	–	60	K/W
		with air speed 2 m/s	–	–	45	K/W
G	Weight	–	–	0.9	–	g

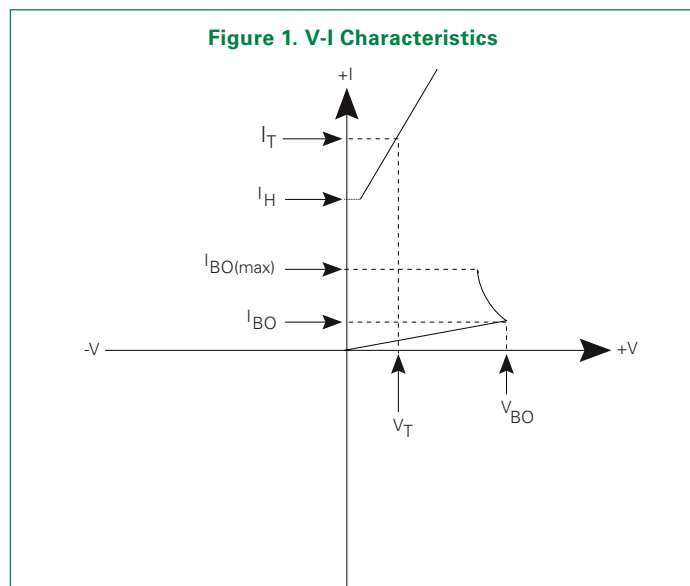
Packing Options

Part Number	Marking	Packing Mode	MOQ
IXBOD2-07	IXBOD2-07	Box	100
IXBOD2-08	IXBOD2-08	Box	100
IXBOD2-09	IXBOD2-09	Box	100
IXBOD2-10	IXBOD2-10	Box	100
IXBOD2-11	IXBOD2-11	Box	100
IXBOD2-12	IXBOD2-12	Box	100

Part Marking

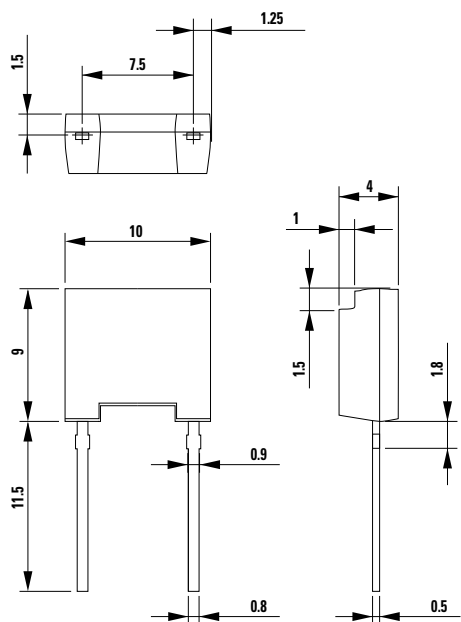


Characteristic Curves



Package Dimensions (FP-Case)

Dimension in mm (1 mm= 0.0394")



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Part of:

