



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



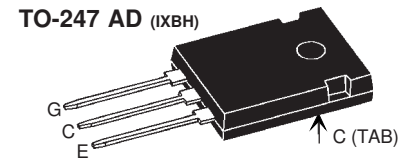
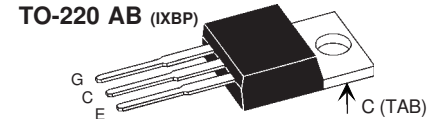
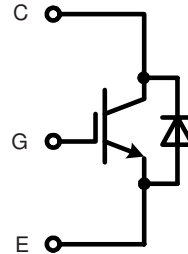
High Voltage BIMOSFET™

Monolithic Bipolar MOS Transistor

IXBP 5N160 G
IXBH 5N160 G

$I_{C25} = 5.7 \text{ A}$
 $V_{CES} = 1600 \text{ V}$
 $V_{CE(sat)} = 4.9 \text{ V}$
 $t_f = 70 \text{ ns}$

Preliminary data sheet



A = Anode, C = Cathode, TAB = Cathode

IGBT			
Symbol	Conditions	Maximum Ratings	
V_{CES}	$T_{VJ} = 25^\circ\text{C to } 150^\circ\text{C}$	1600	V
V_{GES}		± 20	V
I_{C25}	$T_C = 25^\circ\text{C}$	5.7	A
I_{C90}	$T_C = 90^\circ\text{C}$	3.5	A
I_{CM} V_{CEK}	$V_{GE} = 10/0 \text{ V}; R_G = 47 \Omega; T_{VJ} = 125^\circ\text{C}$ RBSOA, Clamped inductive load; $L = 100 \mu\text{H}$	6 $0.8V_{CES}$	A
P_{tot}	$T_C = 25^\circ\text{C}$	68	W

Features

- High Voltage BIMOSFET™
- substitute for high voltage MOSFETs with significantly lower voltage drop
- MOSFET compatible control 10 V turn on gate voltage
- fast switching for high frequency operation
- reverse conduction capability
- industry standard package
- TO-220AB
- TO-247AD
- epoxy meets UL94V-0

Applications

- switched mode power supplies
- DC-DC converters
- resonant converters
- lamp ballasts
- laser generators, x ray generators

Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
$V_{CE(sat)}$	$I_C = 3 \text{ A}; V_{GE} = 15 \text{ V}; T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$		4.9 5.6	7.2 V
$V_{GE(th)}$	$I_C = 0.3 \text{ mA}; V_{GE} = V_{CE}$	3.5		5.5 V
I_{CES}	$V_{GE} = 0 \text{ V}; V_{CE} = V_{CES}; T_{VJ} = 25^\circ\text{C}$ $V_{CE} = 0.8V_{CES}; T_{VJ} = 125^\circ\text{C}$		50	150 μA
I_{GES}	$V_{CE} = 0 \text{ V}; V_{GE} = \pm 20 \text{ V}$			100 nA
$t_{d(on)}$ t_r $t_{d(off)}$ t_f	Inductive load, $T_{VJ} = 125^\circ\text{C}$ $V_{CE} = 960 \text{ V}; I_C = 3 \text{ A}$ $V_{GE} = 10/0 \text{ V}; R_G = 47 \Omega$		140 200 120 70	ns ns ns ns
C_{ies} Q_{Gon}	$V_{CE} = 25 \text{ V}; V_{GE} = 0 \text{ V}; f = 1 \text{ MHz}$ $V_{CE} = 600 \text{ V}; V_{GE} = 10 \text{ V}; I_C = 3 \text{ A}$		325 26	pF nC
V_F	(reverse conduction); $I_F = 3 \text{ A}$		6	V
R_{thJC}				1.85 K/W

IXYS reserves the right to change limits, test conditions and dimensions.

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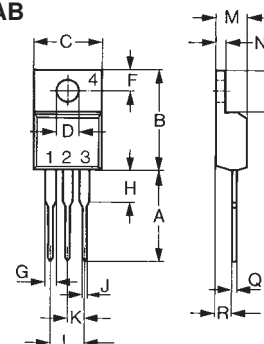
IXYS Semiconductor GmbH
Edisonstr. 15, D-68623 Lampertheim
Phone: +49-6206-503-0, Fax: +49-6206-503627

IXYS Corporation
3540 Bassett Street, Santa Clara CA 95054
Phone: (408) 982-0700, Fax: 408-496-0670

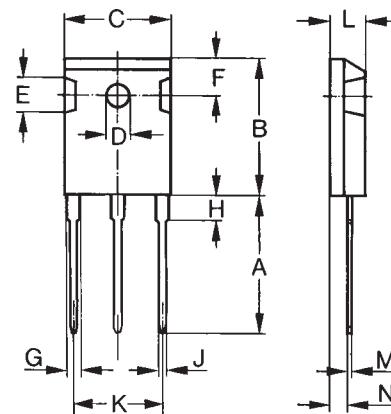
Component

Symbol	Conditions	Maximum Ratings	
T_{VJ}		-55...+150	°C
T_{stg}		-55...+125	°C
M_D	mounting torque	(TO-220)	0.6 Nm
		(TO-247)	1.2 Nm

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
R_{thCH}	with heatsink compound		0.25	K/W
Weight	(TO-220)		2	g
	(TO-247)		6	g

Dimensions
TO-220 AB


Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	12.70	13.97	0.500	0.550
B	14.73	16.00	0.580	0.630
C	9.91	10.66	0.390	0.420
D	3.54	4.08	0.139	0.161
E	5.85	6.85	0.230	0.270
F	2.54	3.18	0.100	0.125
G	1.15	1.65	0.045	0.065
H	2.79	5.84	0.110	0.230
J	0.64	1.01	0.025	0.040
K	2.54	BSC	0.100	BSC
M	4.32	4.82	0.170	0.190
N	1.14	1.39	0.045	0.055
Q	0.35	0.56	0.014	0.022
R	2.29	2.79	0.090	0.110

TO-247 AD


Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D*	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102