



VISHAY INTERTECHNOLOGY, INC.

HIGH POWER PRODUCTS

SELECTOR GUIDE



IGBT MODULES

MTP
ECONO-2
INT-A-Pak
SIP
SOT-227

特许专业代理商

WESTPAC ELECTRONICS LIMITED

威柏电子有限公司

香港九龙观塘成业街 号怡生工业中心H1座7字楼

TEL: (852) 2763 5991

FAX: (852) 2343 6979

Website: www.westpac-hk.com

深圳
深圳市福田区金田路
诺德中心 楼 室

上海:
上海市南丹东路238号
金轩大厦27楼A座
TEL: (021)5489 1461
FAX: (021)5425 9682

青岛:
青岛市市南区丰县路2号
博思公寓2-1902
TEL: (0532) 8823 1566
FAX: (0532) 8580 7948

技术研发中心:
东莞市凤岗镇
金凤凰开发工业区金城路

www.vishay.com



IGBT Modules



High-efficiency IGBT modules from Vishay Intertechnology feature industry-standard outlines with a choice of pt and npt IGBT technologies. Configured as single switches, inverters, choppers, half-bridges, or in custom configurations, these modules are the ideal choice for high-frequency power applications that demand high-efficiency performance. They are designed for use as a main switching device in switchmode power supplies, uninterruptible power supplies, industrial welding, motor drives, and power factor correction systems. Typical applications include boost and buck converters, forward and double forward converters, half bridges, full bridges (H-bridge), and three-phase bridges. Low thermal resistance allows Vishay IGBT modules to operate at higher case temperatures while maintaining the operating junction temperature within safe limits. Electrically isolated from the circuit, the base plate is exposed, allowing for direct mounting to the heat sink. With improved current sharing and lower operating junction temperatures, designers can now achieve higher system reliability. Vishay IGBT modules are 100 % lead (Pb)-free and RoHS-compliant and meet industry standards for safety including UL approval.

Features






- Wide range of industry-standard package styles
- Direct mount on heat sink
- Choice of pt and npt IGBT technologies
- Low- $V_{ce(on)}$ IGBT
- Switching frequency from 1 kHz to 150 kHz
- Optimized anti-parallel ultra-fast diode with soft recovery characteristics
- Rugged transient performance
- High isolation voltage (2500 V)
- 100 % lead (Pb)-free and RoHS-compliant
- Low thermal resistance
- Wide operating temperature range (– 40 °C to + 150 °C)
- UL-approved

Options

- Short-circuit capability available on many configurations
- Optional SMD integrated thermistor
- Customizable for specific application needs

Applications

- Industrial high-frequency welding
- Switchmode power supplies
- Uninterruptible power supplies
- Motor drives
- Power factor correction

Product	Package Model	Maximum Dimensions, LWH (mm)	Pin-out	Number of Connectors	Circuit Configurations Available	Voltage Range (V)	Current Ratings at 25 °C (A)	Frequency Speed Grade (kHz)	Part Number Series
IGBT Technology — npt with short circuit capability or pt silicon available									
	SIP	62.4 x 22 x 7.9	Solderable pins	Up to 19	6PAK inverter	600	8 – 30	1 – 60	CPV...
					Customized configuration				
	MTP	63.5 x 32.5 x 16	Solderable pins	Up to 12	Half bridge	600 – 1200	30 – 50	8 – 150	MT060WHTAPBF MT120UFAPBF MT060ULSTAPBF
					Full bridge				
					Chopper				
					Customized configuration				
	IAP	94 x 35 x 29	Screwable	7	Half bridge	600 – 1200	100 – 200	dc – 60	GA...TS... GB...TS... GB...SS...
					Single switch				
					Customized configuration				
					Customized configuration				
	ECONO-2	107.8 x 45.4 x 17	Solderable pins	Up to 50	6PAK inverter	600 – 1200	15 – 75	8 – 60	GB...XF... GB...YF... GB...RF...
					4PAK				
					PIM (bridge-brake-inverter)				
					Customized configuration				
	SOT-227	38.3 x 25.7 x 12.3	Screwable	4	Single switch	600 – 1200	50 – 200	dc – 150	GA...SA...P GA...DA...P GB...LA...P GB...NA...P GB...DA...P
					Chopper				
					Customized configuration				



Configuration	Voltage (V)	Current Rating (A) @ 25 °C	MTP	ECONO-2
				
			8 kHz – 150 kHz	8 kHz – 60 kHz
4PAK	1200	50		GB50YF120N
		75		GB75YF120N
6PAK	600	8		
		15		
		20		GB20XF60K
		30		GB30XF60K
		50		GB50XF60K
		75		GB75XF60K
	1200	10	GB05XP120KTPBF	GB10XF120K
		15	GB15XP120KTPBF	GB15XF120K
		25		GB25XF120K
		35		GB35XF120K
PIM with Thermistor	600	10		GB10RF60K
		15		GB15RF60K
		20		GB20RF60K
		30		GB30RF60K
		50		GB50RF60K
	1200	10		GB10RF120K
		15		GB15RF120K
		25		GB25RF120K
Full Bridge	500	19	19MT050XFAPBF	
	600	25	25MT060WFAPBF	
	1200	20	20MT120UFAPBF	
Half Bridge	600	50	50MT060WHTAPBF	
		75	70MT060WHTAPBF	
		100		
		150		
		200		
		200		
	1200	40	40MT120WHAPBF	
		75		
		100		
Single Switch	600	100		
		200		
		400		
	1200	64		
Chopper	600	75		
		50	50MT060ULSTAPBF	
		70		
		100		
	1200	100 – 150		
		50		

Key: Frequency Speed Grade

Released

In Development

Please Note: Customized configuration available for all packages upon demand.

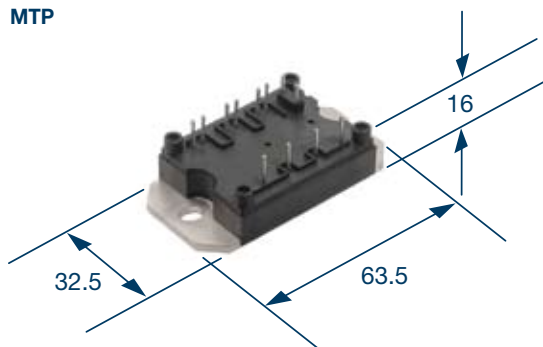


IGBT Modules

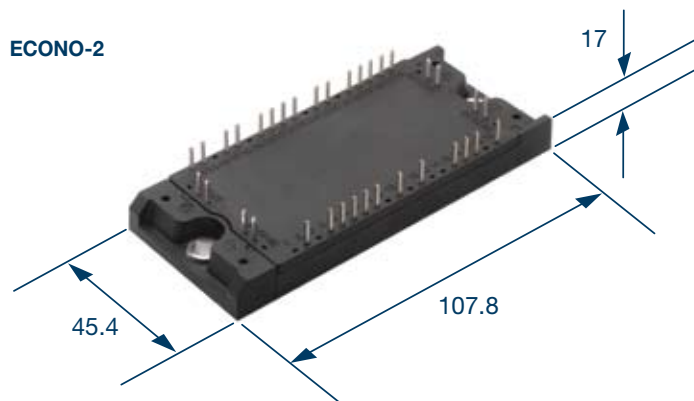


Dimensions in Millimeters

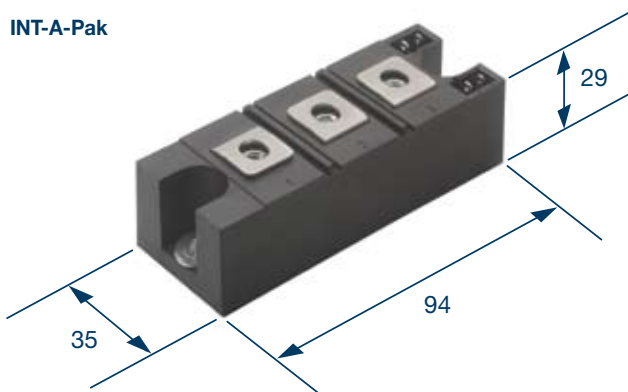
MTP



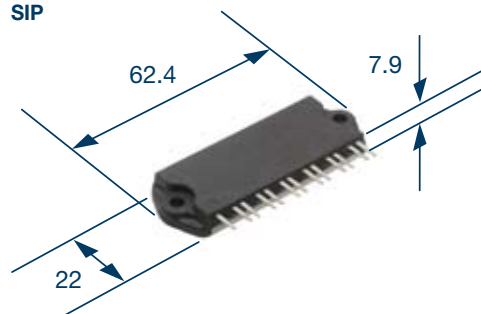
ECONO-2



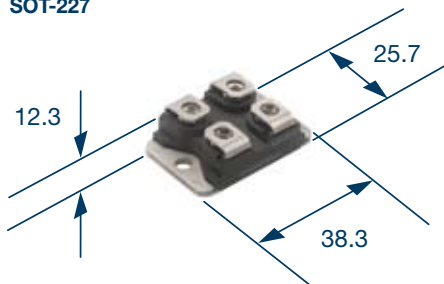
INT-A-Pak



SIP



SOT-227



NOTICE Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies. Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right. The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.

特许专业代理商

WESTPAC ELECTRONICS LIMITED 威柏电子

Tony Yang

Westpac 
Electronics
Sales engineer

* * * * *

Westpac Electronics LTD SZ office

香港威柏電子深圳辦事處(深圳威柏德)

电话:0755-8826 7606

传真:0755-8826 7406

E-mail: TonyYang@westpac-hk.com.hk

* * * * *

特许专业代理商

WESTPAC ELECTRONICS LIMITED

威 柏 电 子 有 限 公 司

香港九龍觀塘成業街16號怡生工業中心H1座7字樓

TEL: (852) 2763 5991

FAX: (852) 2343 6979

E-mail: info@westpac-hk.com.hk

Website: www.westpac-hk.com

深圳:

深圳市福田区金田路
诺德中心17楼B室

TEL: (0755) 8826 7606

FAX: (0755) 8826 7406

上海:

上海市南丹东路238号
金轩大厦27楼A座

TEL: (021)5489 1461

FAX: (021)5425 9682

青岛:

青島市市南區豐縣路2號
博思公寓2-1902

TEL: (0532) 8823 1566

FAX: (0532) 8580 7948

技术研发中心:

东莞市凤岗镇
金凤凰开发工业区金城路