

## New Add-A-Pak Gen VII Power Modules

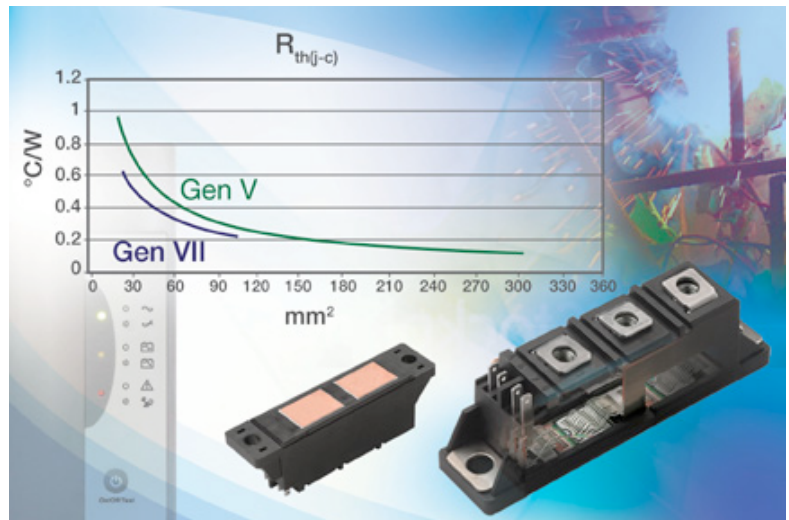
### The News:

### Vishay Launches AAP Gen VII Power Module Series With Improved Current Ratings Up to 400 A, Reverse Voltages to 1600 V, Isolation Voltage of 3500 V, and Lighter Lead (Pb)-Free ADD-A-PAK Package

Vishay Intertechnology, Inc. (NYSE: VSH) unveils its Gen VII series of general-purpose high-voltage power modules, which feature increased current handling capability, lighter weight, lower thermal resistance, improved reliability, and a totally lead (Pb)-free construction.

### Features:

- Lighter, more robust construction with improved thermal performance and reliability
- Offering includes standard diode, thyristor/diode, thyristor/thyristor, and Schottky rectifier combinations
- Custom versions with outstanding performance in specific customer-specified parameters are readily available
- Packaged in the TO-240AA-compatible ADD-A-PAK
  - Improves thermal performance by 20 % and reduces product weight to just 75 g
  - Improves reliability during power cycling
  - Entirely lead (Pb)-free and RoHS-compliant
- High current handling capability
  - 26 A to 105 A for the diode and thyristor combinations
  - 110 A to 400 A for the Schottky rectifier combinations
- High blocking voltage
  - 400 V to 1600 V for the diodes and thyristors
  - 30 V to 150 V for the Schottky rectifiers
- $dV/dt$  of 1000 V/ $\mu$ s
- RMS voltage isolation capability of 3500 V
- High surge capability of up to 3000 A
- Maximum junction temperature range from 125 °C to 175 °C





## Key Specifications (standard versions):

Part number	Datasheet	Type	$I_{T(AV)}$ (A)	$V_{RRM} / V_{DRM}$ (V)	$T_J$ max (°C)
VSK.56..	<a href="#">94625</a>	Standard Diodes	60	400 to 1600	150
VSK.71..	<a href="#">94626</a>	Standard Diodes	80	400 to 1600	150
VSK.91..	<a href="#">94627</a>	Standard Diodes	100	400 to 1600	150
VSK.105..	<a href="#">94628</a>	Thyristor/Diode, Thyristor/Thyristor	105	400 to 1600	125
VSK.26..	<a href="#">94629</a>	Thyristor/Diode, Thyristor/Thyristor	27	400 to 1600	125
VSK.41..., VSK.56..	<a href="#">94630</a>	Thyristor/Diode, Thyristor/Thyristor	45 / 60	400 to 1600	125
VSK.71..	<a href="#">94631</a>	Thyristor/Diode, Thyristor/Thyristor	75	400 to 1600	125
VSK.91..	<a href="#">94632</a>	Thyristor/Diode, Thyristor/Thyristor	95	400 to 1600	125
VSK(U, V)41..., VSK(U, V)56..	<a href="#">94653</a>	Thyristor/Thyristor	45, 60	400 to 1600	125
VSKU71..., VSKV71..	<a href="#">94654</a>	Thyristor/Thyristor	75	400 to 1600	125
VSKU91..., VSKV91..	<a href="#">94655</a>	Thyristor/Thyristor	95	400 to 1600	125
VVSKU105..., VSKV105..	<a href="#">94656</a>	Thyristor/Thyristor	105	400 to 1600	130
VSKCS220/030	<a href="#">94633</a>	Schottky Rectifier	220	30	150
VSKCS400/045	<a href="#">94634</a>	Schottky Rectifier	400	45	150
VSKCS401/045	<a href="#">94635</a>	Schottky Rectifier	400	45	175
VSKCS403/100	<a href="#">94636</a>	Schottky Rectifier	400	100	175
VSKCS408/060	<a href="#">94637</a>	Schottky Rectifier	400	60	150
VSKCS440/030	<a href="#">94638</a>	Schottky Rectifier	440	30	150
VSKDS220/030	<a href="#">94639</a>	Schottky Rectifier	110	30	150
VSKDS400/045	<a href="#">94640</a>	Schottky Rectifier	200	45	150
VSKDS401/045	<a href="#">94641</a>	Schottky Rectifier	200	45	175
VSKDS403/100	<a href="#">94642</a>	Schottky Rectifier	200	100	175
VSKDS408/060	<a href="#">94643</a>	Schottky Rectifier	200	60	150
VSKDS440/030	<a href="#">94644</a>	Schottky Rectifier	220	30	150
VSKJS440/030	<a href="#">94645</a>	Schottky Rectifier	440	30	150

## Key Applications:

Isolated power modules in half-bridge, center-tab common anode, and common cathode configurations in high-voltage regulated power supplies, temperature and motor control circuits, uninterruptible power supplies (UPS), battery chargers, and many other industrial applications

## The Perspective:

Packaged in the TO-240AA-compatible ADD-A-PAK, Vishay's new Gen VII series of general-purpose high-voltage power modules each integrate two active components in series and include standard diode, thyristor/diode, thyristor/thyristor, and Schottky rectifier combinations. The devices feature improved current ratings up to 400 A, high blocking voltage of up to 1600 V, a high RMS voltage isolation capability of 3500 V. and a high surge capability of up to 3000 A.



# New Product Info



**Product Group:** Vishay Semiconductors, High-Power Products / **February 2009**

Beyond being entirely lead (Pb)-free and RoHS-compliant, the new package construction of the AAP Gen VII power modules eliminates the traditional copper base plate and instead features an exposed direct bonded copper substrate, which improves thermal performance by 20 % and reduces product weight to just 75 g. An aluminum/copper clad wire bond interconnection improves reliability during power cycling and increases repeatability in the manufacturing process. The new construction also serves to eliminate certain process steps requiring the use of chemicals, and thus promotes cleaner and more environmentally friendly manufacturing.

Custom versions of the Gen VII modules, which can accommodate silicon die with dimensions up to 500 mils by 500 mils, are readily available with customer-specified parameters to deliver outstanding performance in specific applications.

**Availability:** Samples and production quantities of Vishay's AAP Gen VII power modules are available now.

## Contact Information:

### Sales

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