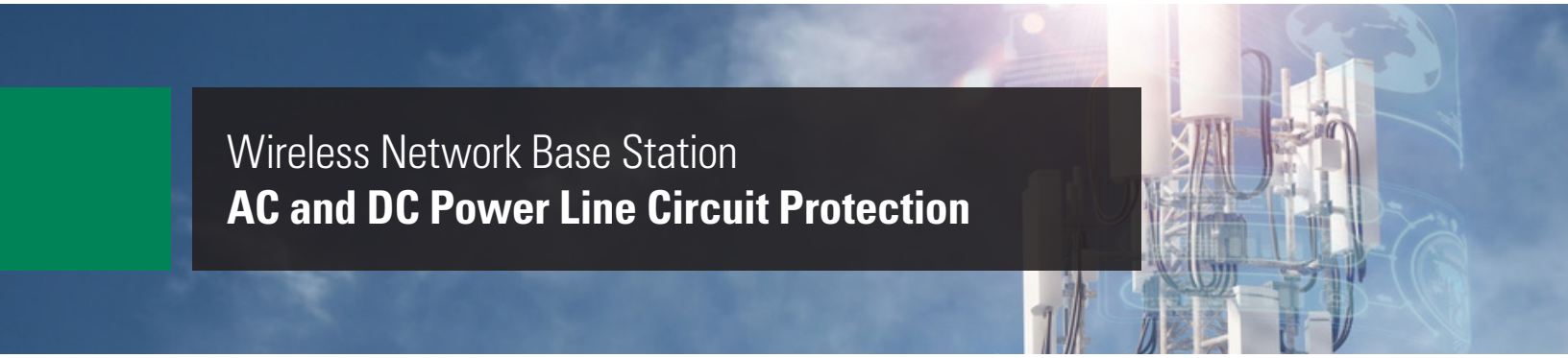
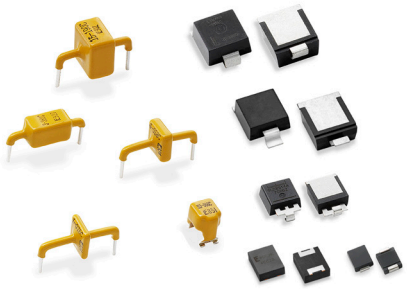
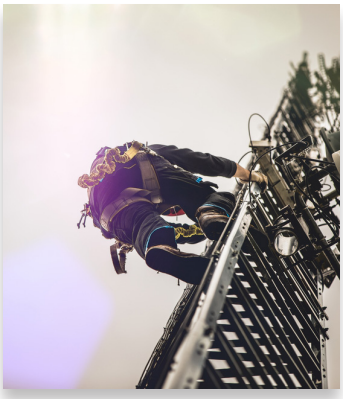


Wireless Network Base Station
AC and DC Power Line Circuit Protection

Littelfuse High Power TVS Diode Series
(AK, LTKAK, SMTOAK2, SMTAK3 and DFNAK)



Field service call



Strike at base station tower

Base Station power line protection devices help prevent service disruptions to customers, improve system reliability, and lower maintenance costs.

Wireless network base stations need protection from overvoltage and overcurrents. These conditions are due to lightning strikes, power line accidents, and other disturbances. Most base stations are in remote, lightning-prone areas, where quick access and efficient repair is difficult and expensive. Using appropriate protective circuits and devices helps lower damage risks.

Power Input Line Risks and Protection

The primary sources of danger to wireless network base stations are lightning and power faults. A strike directly to or nearby the tower can produce high voltages and cause considerable currents to flow through the power input lines. Short circuits can produce similar surges to higher-voltage transmission lines and switching transients. The resulting damage will incur repair time, service downtime, and customer disruptions. The most appropriate protection for these power input lines is a combination of fuses and high-power TVS diodes installed in the AC power distribution box.

Using appropriate protective devices improves reliability and minimizes field service calls.

The Littelfuse high-power TVS Diode Series, including the AK, LTKAK, SMTOAK2, SMTAK3 and DFNAK are specifically designed for applications that require high energy transient voltage protection.

Littelfuse TVS Diode Series: AK, LTKAK, SMTOAK2, and SMTAK3

Littelfuse High Power TVS Diode Series, including the AK, LTKAK, SMTOAK2, SMTAK3, and DFNAK offer superior clamping performance over standard Silicon Avalanche Diode (SAD) technologies.

They offer unique characteristics that provide a clamping voltage lower than the avalanche voltage and above the rated working voltage. Any voltage rise due to increased current conduction is contained to a minimum, providing the best possible protection level.

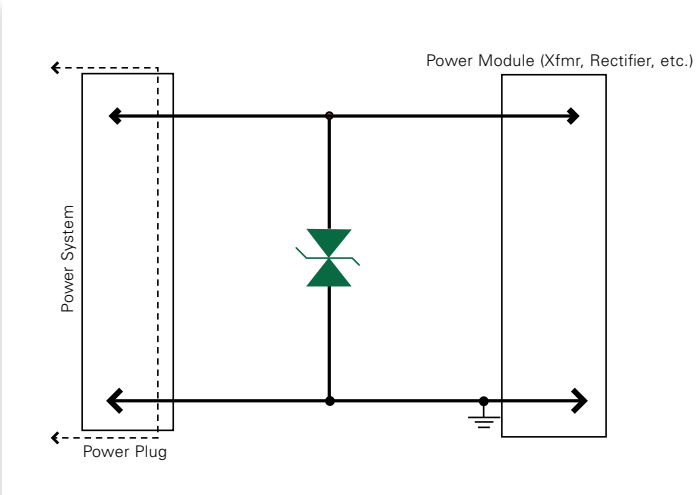
Connect the Littelfuse TVS Diode Series (AK, LTKAK, SMTOAK2, SMTAK3 and DFNAK) in either series or parallel to create high-capacity protection solutions.

High Power TVS Diodes offer a better solution than more conventional overvoltage protection methods, while the surface-mounted LTKAK, SMTOAK2, SMTAK3 and DFNAK Series are ideal solutions for low profile compact space requirements.

Compared to conventional technologies, High Power TVS Diode Series offers the following benefits:

- Precise clamping voltage
- No wear-out mechanism
- Lower leakage
- Faster response
- Compact design (LTKAK, SMTOAK2, SMTAK3 and DFNAK series)
- SMD package compatible with automated PCB assembly process (LTKAK, SMTOAK2 and DFNAK series)
- Improved lead inductance enabling lower clamping voltages
- Improved heat sink capability

High Energy TVS for power supply protection



Using high-power TVS Diodes in a power supply configuration offer advantages over conventional methods, including no wear-out mechanism, faster response, and compact design.

Series Name	Package Type	Package	Polarity	Peak Pulse Current (I_{PP} 8x20µs) (kA)	Halogen Free	RoHS Compliant	Photo
AK-Y	Axial Leaded	AK	Bidirectional	1/ 3/ 6 /10/15 /20	Yes	Yes	
LTKAK	SMD	SMTO-218	Bidirectional	2/ 3/ 6/ 10	Yes	Yes	
SMTAK3	SMD	SMTAK	Bidirectional	3	Yes	Yes	
SMTOAK2	SMD	SMTO-263	Bidirectional	2	Yes	Yes	
DFNAK3	SMD	DFN10*8*3	Bidirectional	3	Yes	Yes	
DFNAK1	SMD	DO-214AB	Bidirectional	1	Yes	Yes	

Visit www.littelfuse.com/products/overvoltage-protection/tvs-diodes/high-power for a wide range of product selections.