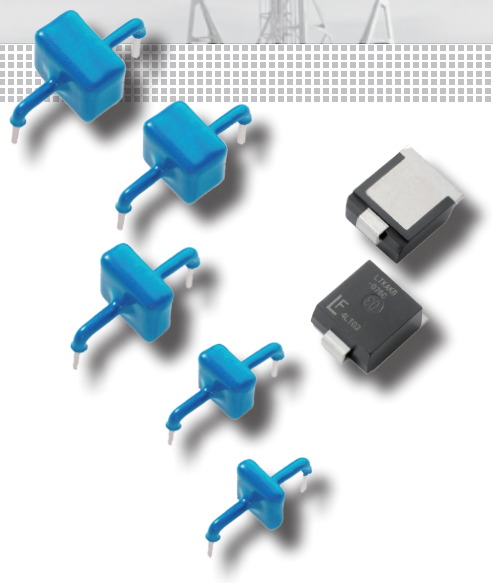
Littelfuse
Expertise Applied | Answers Delivered

High Power TVS Diodes
AK Families Including LTKAK Series

HIGH ENERGY
POWER LINE
SURGE PROTECTION



Improve System Reliability and Lower Maintenance Costs

Littelfuse AK/ LTKAK Series high energy TVS Diodes offer superior clamping performance over standard Silicon Avalanche Diode (SAD) Technologies. LTKAK series also offer the highest power rating (8x20µs waveform) among surface mount TVS available in the current market.

The Higi Power AK Families TVS Diodes offer a better solution than conventional overvoltage protection methods, while the latest surface mounted version LTKAK series offer a low profile, reflow solderable option for compact space requirement.

Applications

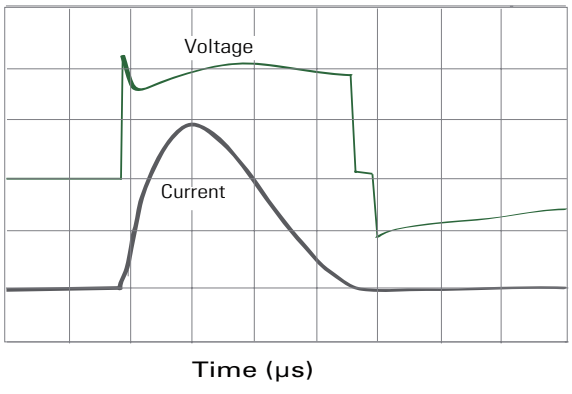
- Cell Phone Base Stations
- Industrial Transient Voltage Surge Suppressors (TVSSs)
- Defense and Avionics
- Power Grid and Distribution Systems
- AC/ DC Power Line Circuit Protection

Compare to Conventional Technology, AK/ LTKAK Series Offer

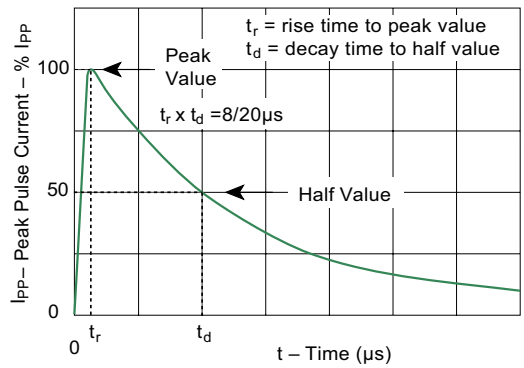
- Precise clamping voltage
- No wear-out mechanism
- Lower leakage
- Faster response
- Compact design
- Truly surface mountable package option for LTKAK series
- Improved lead inductance for LTKAK series
- Improved heat sink capability for LTKAK series
- Total power consumption saving and asy design by using AK/LTKAK series that eliminate inductor design

Series Name	Package Type	Polarity	Reverse Standoff Voltage (V_R)	Peak Pulse Current (I_{PP} 8x20µs)	Halogen-Free	RoHS Compliant
AK1	Redial Lead	Bidirectional	76	1kA	•	•
AK3	Redial Lead	Bidirectional	15-430	3kA	•	•
AK6	Redial Lead	Bidirectional	30-430	6kA	•	•
AK10	Redial Lead	Bidirectional	15-530	10kA	•	•
AK15	Redial Lead	Bidirectional	58-76	15kA	•	•
LTKAK6	Surface Mount	Bidirectional	58-76	6kA	•	•
LTKAK10	Surface Mount	Bidirectional	58-76	10kA	•	•

Surge Response (8/20 Surge current waveform)



8/20 Pulse Waveform



The power dissipation causes a change in avalanche voltage during the surge and the avalanche voltage eventually returns to the original value when the transient has passed.