

# High Surge ESD Protection Diode

Robust Defense | Reliable Protection



As electronic systems become increasingly complex, internal components are exposed to severe electromagnetic interference (EMI) and transient overvoltage threats, such as ESD, EFT, and surge events. PANJIT offers a series of high-surge-capable unidirectional and bidirectional ESD protection diodes, engineered to ensure stable and reliable operation of your devices under harsh conditions.

## ► Key Features

- IEC 61000-4-2 (ESD): ±30 kV Air / Contact
- IEC 61000-4-4 (EFT): 80 A (5/50 ns)
- IEC 61000-4-5 (Surge): 1–100 A
- High Surge Capability: Enhances system reliability
- Low Clamping Voltage: Reduces stress on sensitive components
- Low Leakage Current: Minimizes power consumption
- Fast Response: Nanosecond-level protection
- Wide Operating Voltage: 2.5 V to 48 V
- Unidirectional / Bidirectional Options: Suitable for various circuit protection designs

## ► Target Applications

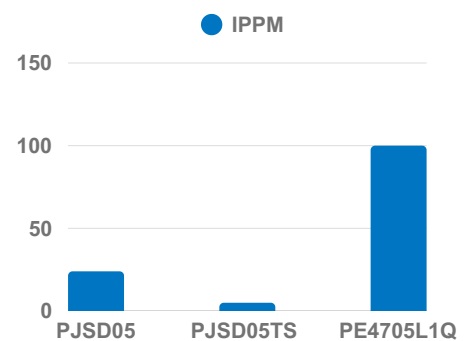
- Power Line Protection (DC Ports, Charging Ports, USB Vbus)
- Low-Speed Data Interfaces (I<sup>2</sup>C, SPI, GPIO)
- Control Signals (Buttons, Switches, LED Drivers)
- Audio Interfaces (3.5mm Audio Ports, Microphones)
- Motor Control and Drive Signals









Part Number	Package	V <sub>RWM</sub>	I <sub>PPM</sub>
		V	A
PJSD05	SOD-123	5	24
PJSD05TS	SOD-523	5	5
PE4705L1Q	DFN1610-2L	5	100






DFN1610-2L achieves 100A surge current in the same compact size as SOD-523, which delivers only 5A, and exceeds the performance of the larger SOD-123.



## ► Products

Direction	Ch.	$V_{RWM}$	$I_{PPM}$	SOD-123	SOD-323	SOD-523	DFN1610-2L	DFN1006-2L	DFN0603-2L
UNI/BI		V	A						
UNI	1	5-36	3.3-17.5	PE43xxAS(-AU)	PE43xxCS(-AU)	PE43xxES(-AU)	-	PE43xxM1Q(-AU)	-
UNI	1	5-36	6-31.2	PE45xxAS(-AU)	PE45xxCS(-AU)	-	-	PE45xxM1Q(-AU)	-
UNI	1	3.3-48	19-100	PE47xxAS(-AU)	-	-	PE47xxL1Q(-AU)	-	-
Bi	1	2.5-5	20-30	PEC41xxAS(-AU)	PEC41xxCS(-AU)	-	-	PEC41xxM1Q(-AU)	-
Bi	1	2.5-5	5-10	-	PEC32xxCS(-AU)	PEC32xxES(-AU)	-	PEC32xxM1Q(-AU)	PEC32xxS1Q(-AU)
Bi	1	8-36	1.5-8	PEC38xxAS(-AU)	PEC38xxCS(-AU)	-	-	-	-
Bi	1	5~36	5-30	-	PEC42xxCS(-AU)	-	-	-	-

Direction	Ch.	$V_{RWM}$	$I_{PPM}$	SOT-23	SOT-323	SOT-523
UNI/BI		V	A			
UNI	2	5-36	3.3-17.5	PE43xxC2A(-AU)	PE43xxC2C(-AU)	-
UNI	2	3.3-36	6-37.8	PE45xxC2A(-AU)	-	-
Bi	2	2.5-5	20-30	PEC41xxC2A(-AU)	-	-
Bi	2	2.5-5	5-10	PEC32xxC2A(-AU)	PEC32xxC2C(-AU)	PEC32xxC2E(-AU)
Bi	2	8-36	1.5-8	PEC38xxC2A(-AU)	PEC38xxC2C(-AU)	PEC38xxC2E(-AU)
Bi	2	5~36	5-30	PEC42xxC2A(-AU)	-	-

## ► Typical Applications and Recommended Products

Applications	Recommended Operating Voltage	Part Number	Package
I <sup>2</sup> C/ SPI/ GPIO	3.3 V	PEC3203ES	SOD-523
	5 V	PEC3205ES	
Control Signals (Buttons/ Switches)	3.3 V	PE4303ES	SOD-523
	5 V	PE4305ES	
3.5mm Audio Ports	3.3 V	PEC3203M1Q	DFN1006-2L
	5 V	PEC3205M1Q	
Micro SD/ SD Cards	3.3 V	PEC3203M1Q	DFN1006-2L
	3.3 V	PEC4103M1Q	
DC Ports/ USB Charging Ports	5-48 V	PE47xxL1Q	DFN1610-2L
CAN Bus	24 V	PEC3824C2A-AU PEC4224C2A-AU	SOT-23
		PEC3824C2C-AU	SOT-323
		PEC3824C2E-AU	SOT-523
LIN Bus	24 V	PEC4224CS-AU PEC3824CS-AU	SOD-323
		PEC4315C2C-AU	SOT-323