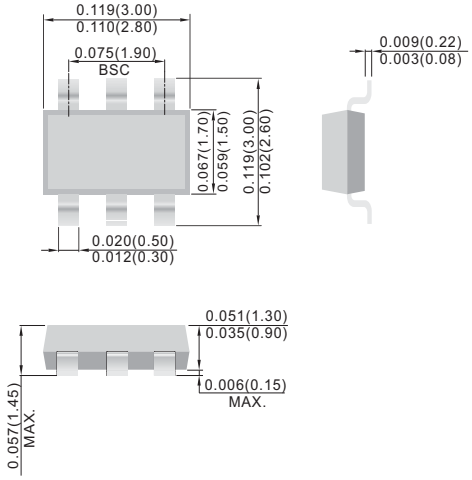
PJSMS05 SERIES

QUAD TVS/ZENER ARRAY FOR ESD AND LATCH-UP PROTECTION

VOLTAGE 5~24 Volts **POWER** 350Watts

This Quad TVS/Zener Array family have been designed to Protect Sensitive Equipment against ESD and to prevent Latch-Up events in CMOS circuitry operating at 5V,12V,15V and 24V.This TVS array offers an integrated solution to protect up to 4 data lines where the board space is a premium.

SOT-23 6L Unit : inch(mm)



FEATURES

- 350W Power Dissipation (8/20µs Waveform)
- Low Leakage Current, Maximum of 5µA at rated voltage
- Very Low Clamping Voltage
- IEC61000-4-2 ESD ±20kV Air, ±15kV Contact Compliance
- Industry Standard Surface Mount Package SOT23-6L
- 100% Tin Matte Finish (ROHS Compliance)
- Lead free in comply with EU RoHS 2002/95/EC directives.

Å Green molding compound as per IEC61249 Std. . (Halogen Free)

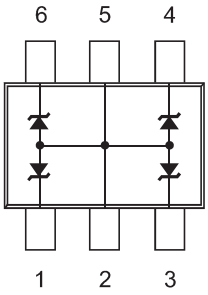
APPLICATIONS

- Personal Digital Assistant(PDA)
- SIM Card Port Protection (Mobile Phone)
- Portable Instrumentation
- Mobile Phones and Accessories
- Memory Card Port Protection

MECHANICAL DATA

- Case: SOT-23 6L, plastic
- Terminals: solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0005 ounces, 0.014 grams
- Marking :

PJSMS05	PJSMS12	PJSMS15	PJSMS24
M05	M12	M15	M24



ABSOLUTE MAXIMUM RATINGS (Per Device) (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (8/20µs Waveform)	P_{PP}	350	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 20 ± 15	kV
Operating Junction Temperature and Storage Temperature Range	T_J,T_{STG}	-55 to +150	°C

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ELECTRICAL CHARACTERISTICS (Per Device) (T_A=25°C unless otherwise noted)

PJSMS05

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	6	-	-	V
Reverse Leakage Current	I_R	V_R = 5V	-	-	5	µA
Clamping Voltage (8/20µs)	Vc	I_{PP} = 5A	-	-	9.8	V
Clamping Voltage (8/20µs)	Vc	I_{PP}=24A	-	-	13	V
Off State Junction Capacitance	C_J	0 Vdc Bias f=1MHz Between I/O pins and pin 2, 5	-	-	225	pF

PJSMS12

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	13.3	-	-	V
Reverse Leakage Current	I_R	V_R = 12V	-	-	1	µA
Clamping Voltage (8/20µs)	Vc	I_{PP} = 5A	-	-	20	V
Clamping Voltage (8/20µs)	Vc	I_{PP}=15A	-	-	25	V
Off State Junction Capacitance	C_J	0 Vdc Bias f=1MHz Between I/O pins and pin 2, 5	-	-	100	pF

PJSMS15

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	15	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	16.7	-	-	V
Reverse Leakage Current	I_R	V_R = 15V	-	-	1	µA
Clamping Voltage (8/20µs)	Vc	I_{PP} = 5A	-	-	24	V
Clamping Voltage (8/20µs)	Vc	I_{PP}=12A	-	-	29	V
Off State Junction Capacitance	C_J	0 Vdc Bias f=1MHz Between I/O pins and pin 2, 5	-	-	80	pF

PJSMS24

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	26.7	-	-	V
Reverse Leakage Current	I_R	V_R = 24V	-	-	1	µA
Clamping Voltage (8/20µs)	Vc	I_{PP} = 5A	-	-	40	V
Clamping Voltage (8/20µs)	Vc	I_{PP}= 8A	-	-	44	V
Off State Junction Capacitance	C_J	0 Vdc Bias f=1MHz Between I/O pins and pin 2, 5	-	-	60	pF

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RATING AND CHARACTERISTIC CURVES

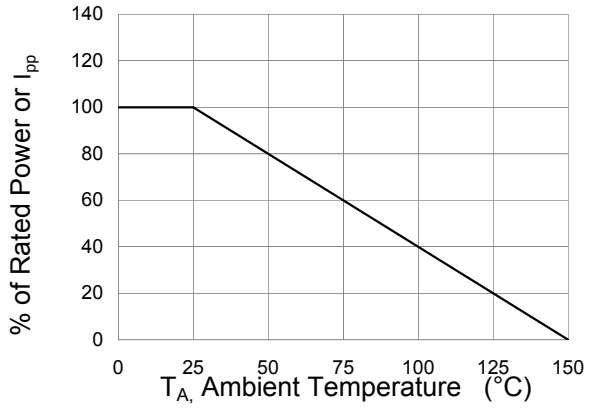

Fig.1 Forward Current Derating Curve

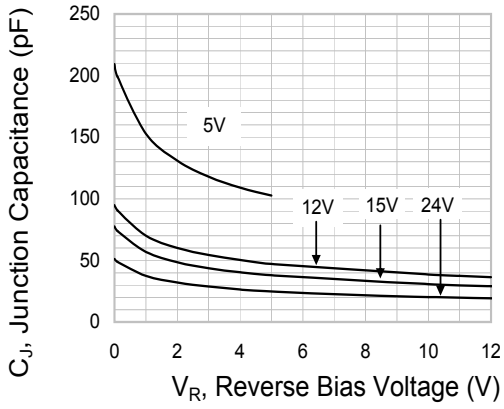

Fig.2 Typical Junction Capacitance

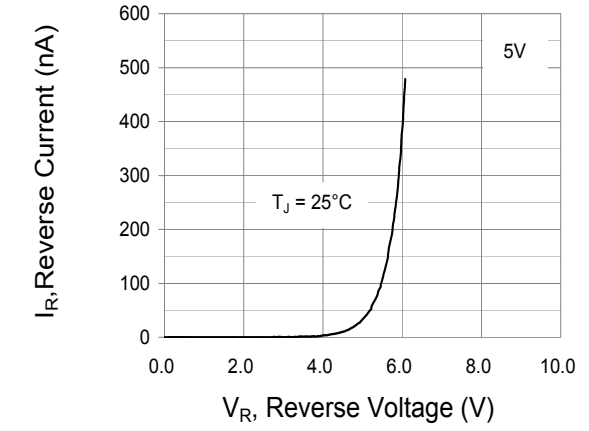

Fig.3 Typical Reverse Characteristics

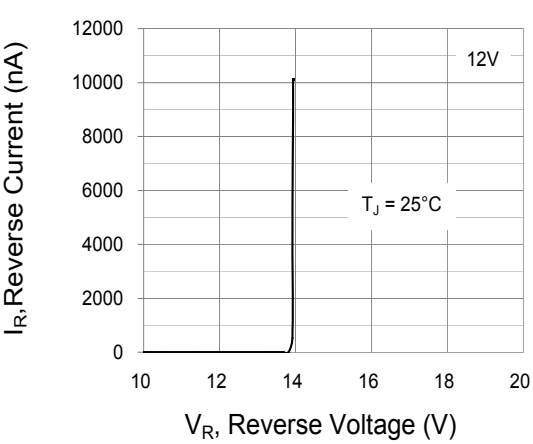

Fig.4 Typical Reverse Characteristics

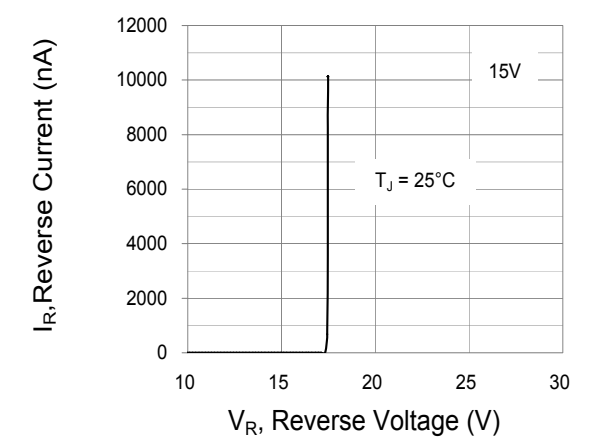

Fig.5 Typical Reverse Characteristics

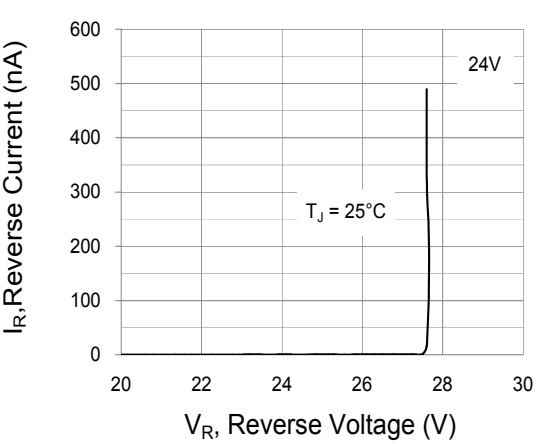

Fig.6 Typical Reverse Characteristics

PJSMS05 SERIES

RATING AND CHARACTERISTIC CURVES

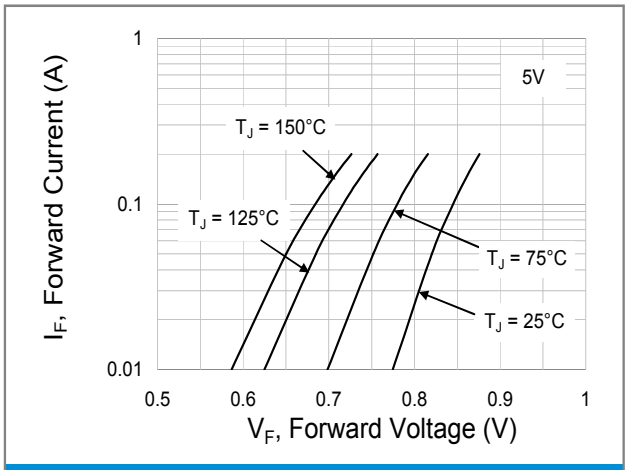

Fig.7 Typical Forward Characteristics

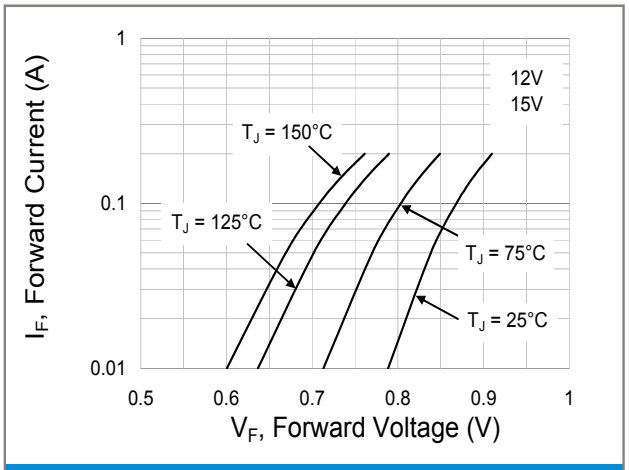

Fig.8 Typical Forward Characteristics

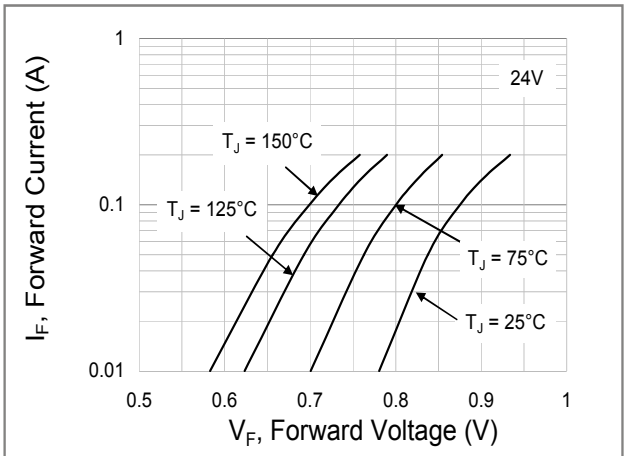

Fig.9 Typical Forward Characteristics

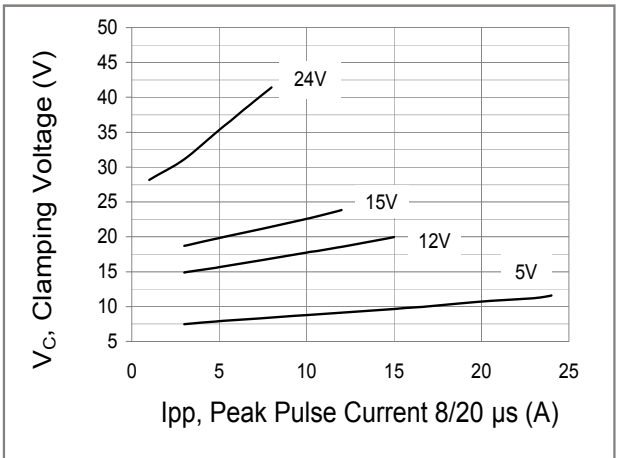

Fig.10 Clamping Voltage vs. Peak Current

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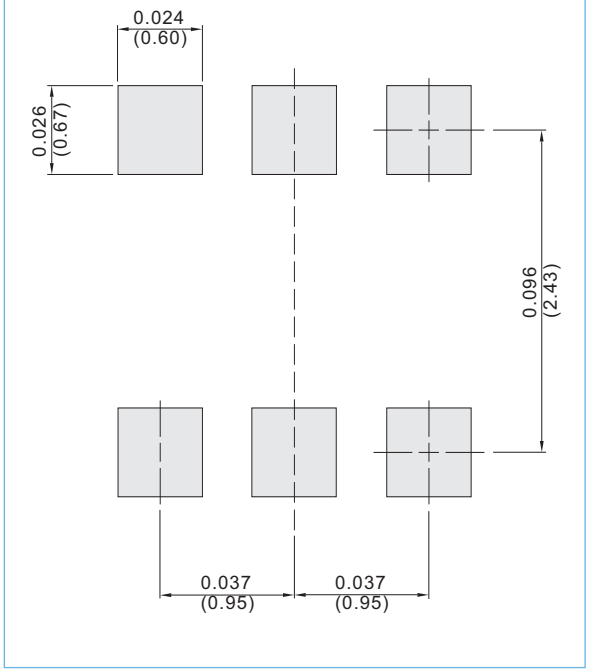
MOUNTING PAD LAYOUT

SOT-23 6L Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 10K per 13" plastic Reel

  T/R - 3K per 7” plastic Reel

LEGAL STATEMENT