

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

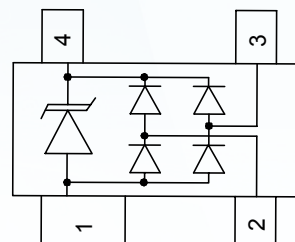
▶ Domestic	Part Number	PSR05-LF-T7
▶ Overseas	Part Number	PSR05-LF-T7
▶ Equivalent	Part Number	PSR05-LF-T7

EV is the abbreviation of name EVVO

Low Capacitance TVS Diode Array

Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 6A (8/20 μs)
- RoHS Compliant



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Mechanical Characteristics

- Package: SOT-143
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power (t _p = 8/20 μs)	P _{pk}	500	W
Peak Pulse Current (t _p = 8/20 μs)	I _{pp}	25	A
Peak Forward Voltage (I _F = 1A, t _p =8/20 μs)	V _{FP}	1.5	V
Lead Soldering Temperature	T _L	260 /10S	°C
Operating Temperature	T _J	-55 to +125	°C
Storage Temperature	T _{STG}	-55 to +150	°C

Low Capacitance TVS Diode Array

Electrical Characteristics (TA=25°C unless otherwise specified)

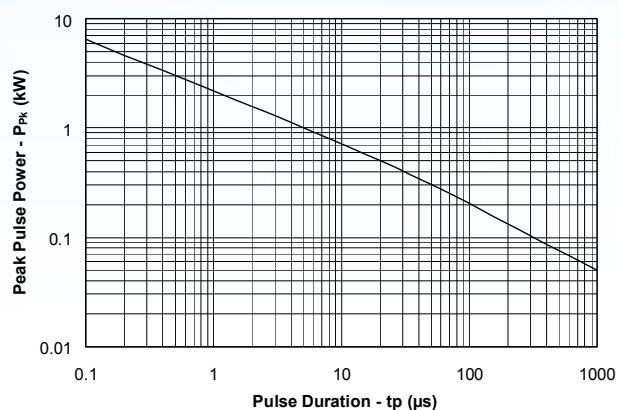
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_t = 1mA$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V, T=25^{\circ}C$			5	μA
Clamping Voltage	V_C	$I_{pp} = 1A, t_p = 8/20\mu s$			9.8	V
Clamping Voltage	V_C	$I_{pp} = 10A, t_p = 8/20\mu s$			12	V
Clamping Voltage	V_C	$I_{pp} = 25A, t_p = 8/20\mu s$			20	V
Junction Capacitance	C_j	Between I/O pins and Ground $V_R = 0V, f = 1MHz$		6	10	pF
		Between I/O pins $V_R = 0V, f = 1MHz$		3		pF

Low Capacitance TVS Diode Array

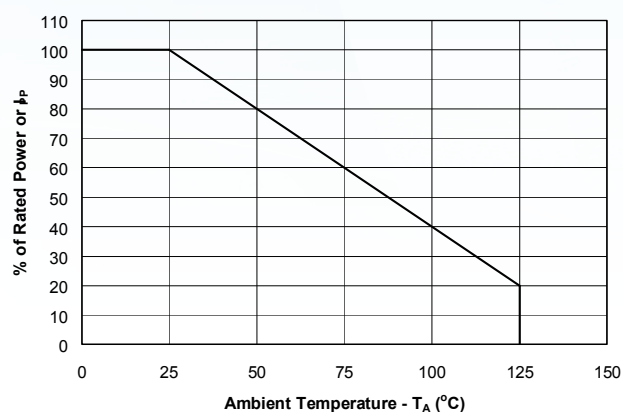
Typical Characteristics

Typical characteristics

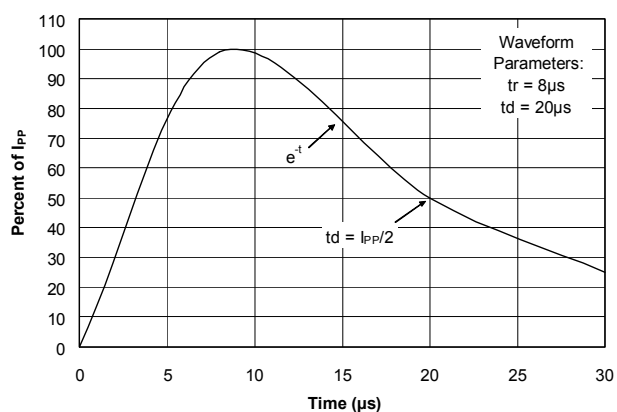
Non-Repetitive Peak Pulse Power vs. Pulse Time



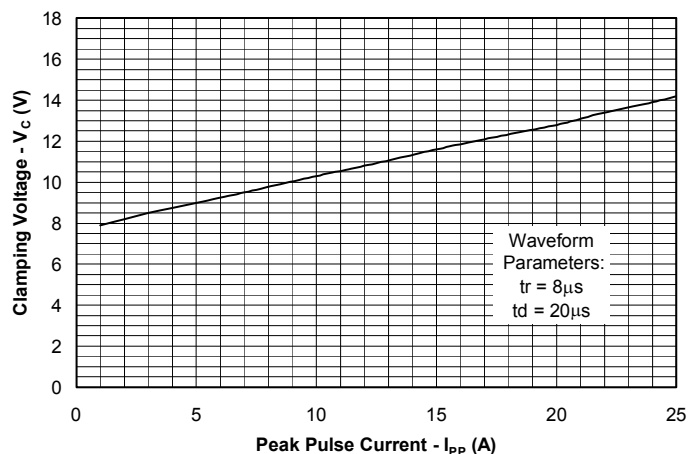
Power Derating Curve



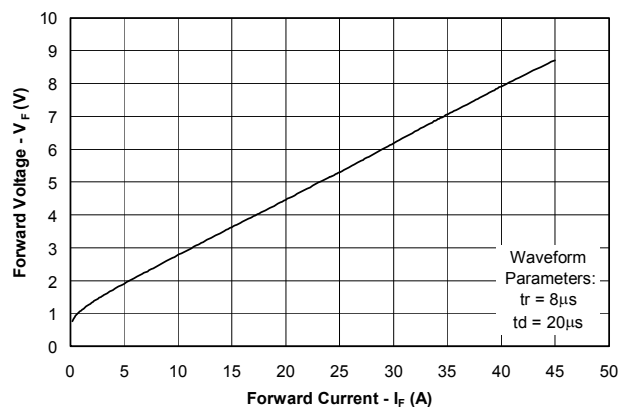
Pulse Waveform



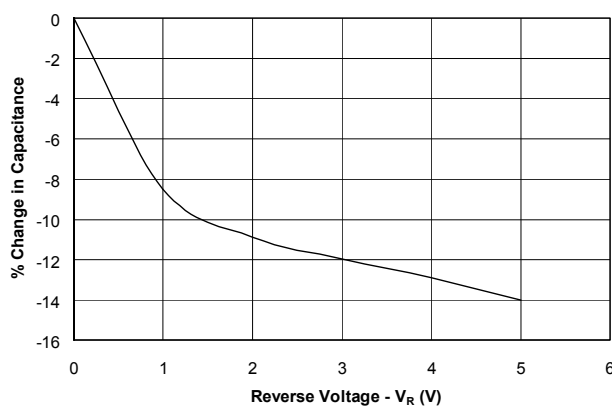
Clamping Voltage vs. Peak Pulse Current



Forward Voltage vs. Forward Current

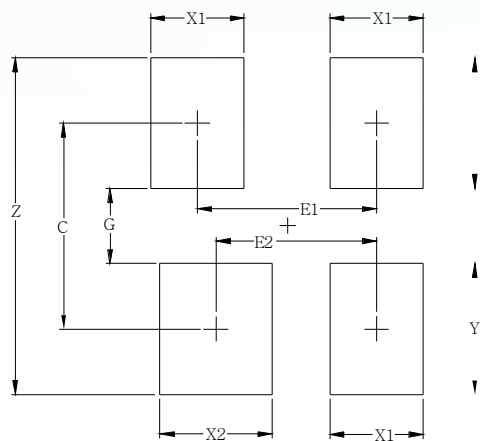


Capacitance vs. Reverse Voltage



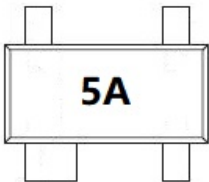
Low Capacitance TVS Diode Array

Outline Drawing - SOT-143



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	2.20	0.087
E1	1.92	0.076
E2	1.72	0.068
G	0.80	0.031
X1	1.00	0.039
X2	1.20	0.047
Y	1.40	0.055
Z	3.60	0.141

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
PSR05-LF-T7	SOT-143	3000	Tape and reel

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