

# Product Brief



SEMTECH PROTECTION PRODUCTS

## RClamp<sup>®</sup> 0506T

Low Capacitance TVS Array



**Low Clamping Performance TVS Array for ESD, Cable Discharge & Surge Protection**

### Key Product Features:

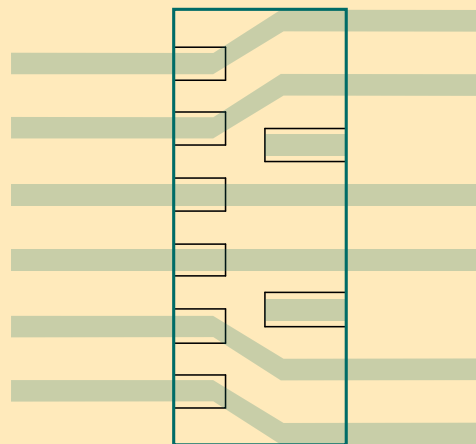
- Low profile (0.4mm high, 0.5mm pitch)
- Low capacitance (0.3pF line-to-line, typical)
- Flow-through design
- Ultra low clamping voltage

### Product Benefits:

- ➔ Meets low profile requirements
- ➔ Maintains signal integrity
- ➔ Reduces trace discontinuities for easy PCB layout
- ➔ Protects latest sensitive IC's

### Applications:

- USB 3.0
- HDMI 1.4
- $\mu$ SD card interfaces
- MMC card interfaces
- MDDI/MIPI interfaces



RClamp0506T flow-through design



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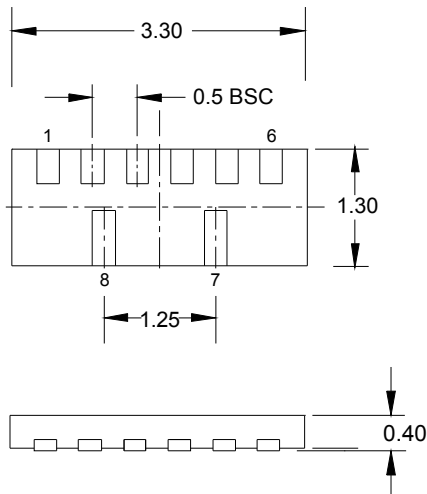
## RClamp® 0506T - Low Capacitance, TVS Diode Array

Maximum Rating	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20us)	$P_{pk}$	75	Watts
Peak Pulse Power (tp = 8/20us)	$I_{pp}$	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	$\pm 18$ $\pm 12$	kV
Operating Temperature	$T_j$	-55 to +125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

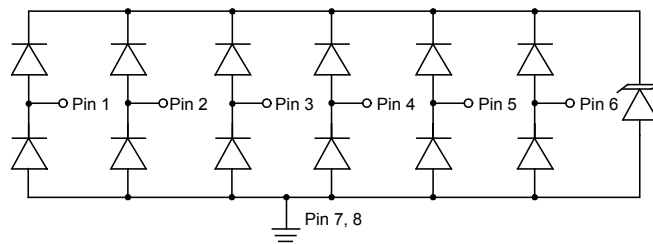
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Parameter	Symbol	Condition	Min	Typ	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$		6.5	8	11	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^\circ C$		0.005	0.100	$\mu A$
Clamping Voltage	$V_C$	$I_{pp} = 5A, t_p = 8/20\mu s$			15	V
Junction Capacitance	$C_j$	Any I/O to Gnd $V_R = 0, f = 1MHz$		0.7	0.8	pF
		I/O to I/O $V_R = 0, f = 1MHz$			0.4	

### Package Dimensions



### Circuit Diagram



### Ordering Information

Part Number	Working Voltage	Qty Per Reel	Reel Size
RClamp0506T.TCT	5V	3,000	7 inches

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