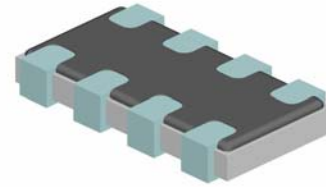


Specification Status: Released

Not to be used for new designs. For new design please contact Tyco Electronics Sales

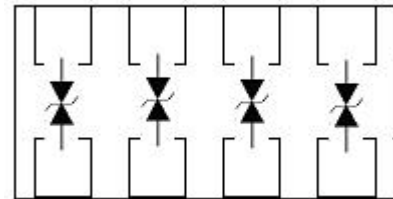
BENEFITS

- Suitable for high speed data transmission applications
- Board space savings
- Help to protect sensitive electronic circuits against damage from electrostatic discharge (ESD) events
- Assist equipment to pass IEC 61000-4-2, level 4 testing



FEATURES

- Thick film technology
- Low capacitance (0.25 pF typical)
- Low clamping voltage
- Capable of withstanding numerous ESD strikes
- Compatible with standard reflow installation procedures
- Bi-directional protection



APPLICATIONS

- Cellular Phones

Caution: This part is not intended to be used under bias, nor for application with a power bus.

MATERIALS INFORMATION

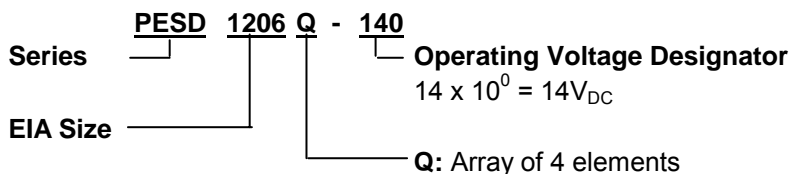
ROHS Compliant

Directive 2002/95/EC
Compliant

ELV Compliant

Directive 2000/53/EC
Compliant

PART NUMBERING



The operating voltage is used to measure leakage current @ 1s

TYPICAL DEVICE RATINGS AND CHARACTERISTICS

	Typical IEC Trigger Voltage ¹	Typical IEC Clamping Voltage after 30ns	Typical TLP Trigger Voltage ²	Typical TLP Clamping Voltage ² after 30ns	Typical TLP Clamping Voltage ² after 60ns	Typical Capacitance @ 1 MHz, 1V _{rms}
Symbol	V _{T(IEC)}	V _{C(IEC)}	V _{T(TLP)}	V _{C(TLP 30)}	V _{C(TLP 60)}	C _p
Unit	V	V	V	V	V	pF
Value	350	30	320	75	65	0.25

Note 1: IEC61000-4-2, level 4, 8kV contact test method

Note 2: TLP test method at 1000V (refer to graph on next page)

Note 3: PESD0603-140 can be used only in application without DC bias

GENERAL CHARACTERISTICS

Storage temperature: -55°C ... +110°C

Storage temperature: -40°C ... + 85°C

ESD voltage capability (tested per IEC 61000-4-2)

- Contact discharge mode: typical 8kV, max 15kV
- Air discharge mode: typical 15kV, max 25kV

ESD pulse withstand: Minimum 1,000 pulses (tested per IEC 61000-4-2, level 4, contact method)

Environmental Specifications

	Thermal Shock	Heat Storage Test	Solderability	Solder Heat	Vibration	Mechanical Shock	Solvent Resistance
Test Conditions	-55°C to 125°C 30min dwell 1000 cycles	110°C, 1000hours	230 °C±5 °C 3±1s, 95% coverage	260 °C, 10s	10 to 50Hz,60s cycle, 2hrs each in X-Y-Z axis	1500G, 0.5ms, X-Y-Z axis, 3 times	IPA ultrasonic 300s
Pass/Fail Criteria	I _L ≤10μA	I _L ≤10μA	I _L ≤10μA	I _L ≤10μA	I _L ≤10μA	I _L ≤10μA	I _L ≤10μA

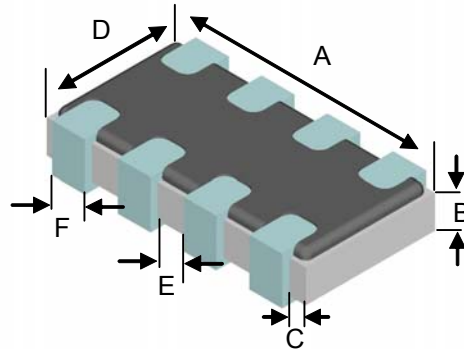
ESD Protector Overvoltage Protection Device

Raychem Circuit Protection Products

PRODUCT: PESD1206Q-140

DOCUMENT: SCD 26108
REV LETTER: I
REV DATE: DECEMBER 7, 2007
PAGE NO.: 3 OF 6

DIMENSIONS



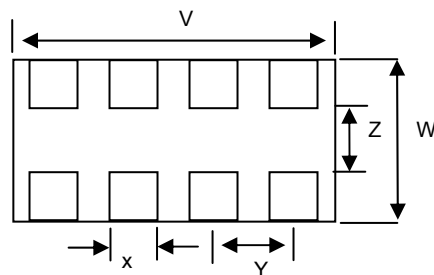
Drawing Not To Scale

Length A		Height B		End Terminal Width C		Width D		Width E		Width F		
MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
mm:	3.0	3.4	0.4	0.6	0.1	0.3	1.4	1.8	0.2	0.6	0.2	0.6
in*:	(0.118)	(0.134)	(0.016)	(0.024)	(0.004)	(0.012)	(0.055)	(0.071)	(0.008)	(0.024)	(0.008)	(0.024)

*Rounded off approximation

RECOMMENDED LAND PATTERN:

Solder thickness 0.15 to 0.2mm

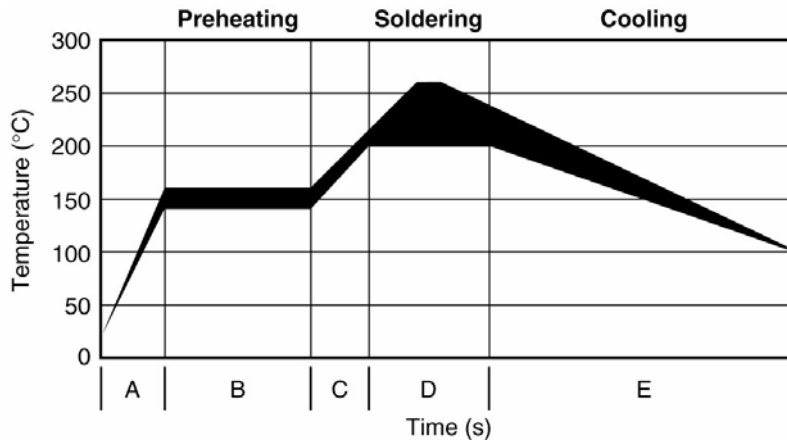


	V Ref	W Ref	X Ref	Y Ref	Z Ref
mm:	3.2 ± 0.2	2.2 ± 0.2	0.50 ± 0.1	0.8 ± 0.2	1.0 ± 0.1
in*:	(0.13 ± 0.008)	(0.10 ± 0.008)	(0.02 ± 0.004)	(0.03 ± 0.008)	(0.04 ± 0.004)

*Rounded off approximation.

SOLDER REFLOW RECOMMENDATIONS:

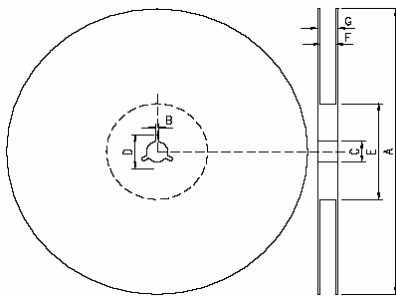
A	Temperature ramp up 1	From ambient to Preheating temperature	30s to 60s
B	Preheating	140°C - 160°C	60s to 120s
C	Temperature ramp up 2	From Preheating to Main heating temperature	20s to 40s
D	Main heating	at 200°C at 220°C at 240°C at 260°C	60s ~ 70s 50s ~ 60s 30s ~ 40s 5s ~ 10s
E	Cooling	From main heating temperature to 100°C	max 4°C/s



PACKAGING

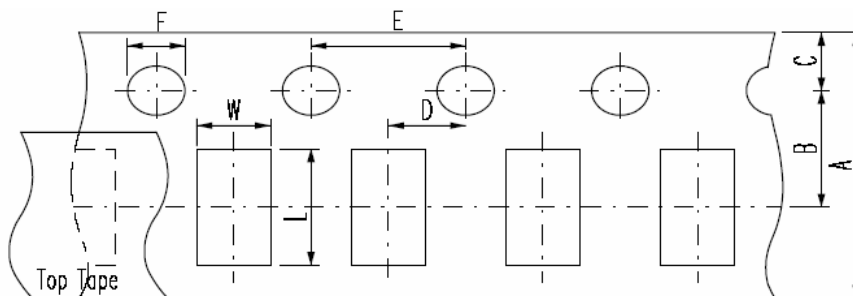
Packaging	Tape & Reel	Standard Box
PESD1206Q-140	5,000	25,000

EIA referenced Reel Dimensions for PESD Devices



Reel Dimensions (mm):

	A	B	C	D	E	F	G
1206 Devices	178.0±2.0	2.0±0.5	13.0±0.5	21.0±0.8	62.0±1.5	9.0±0.5	13.0±1.0



Carrier Dimensions (mm):

	A	B	C	D	E	F	L	W	T ¹
1206 Devices	8.0±0.3	3.5±0.05	1.75±0.1	2.0±0.05	4.0±0.1	1.5±0.1	3.5±0.2	1.9±0.20	0.75±0.05

Product Orientation – always face up (meaning the substrate is at the bottom), but parts do not have polarity mark.

POST REFLOW, CLEANING CONDITIONS

A 5% saponifier combined with water during wash.

For Ultrasonic process water temperature should be at 50°C and board should be submerged for a minimum of one minute in the solutions, then rinse and dry.

For in-line washing, the temperature of the water sprayed should be at 110°C, rinse and drying is done in-line.



Warning: Application Limitations for PESD1206Q-140. This part is not intended to be used under bias, nor for power bus applications. Users should independently evaluate the suitability of and test each product selected for their own applications

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