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[TE Connectivity Raychem Circuit Protection
PESD0603-140](#)

For any questions, you can email us directly:

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308 Constitution Drive
Menlo Park, CA 94025-1164
Phone: 800-227-4856
www.circuitprotection.com

ESD Protector
Overvoltage Protection Device

Raychem Circuit Protection Products

PRODUCT: PESD0603-140

DOCUMENT: SCD 26107
REV LETTER: K
REV DATE: DECEMBER 7, 2007
PAGE NO.: 1 OF 7

Specification Status: Released

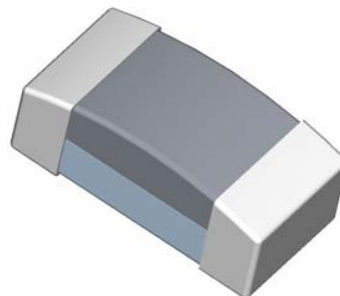
Not to be used for new designs. For new designs please use PESD0603-240.

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

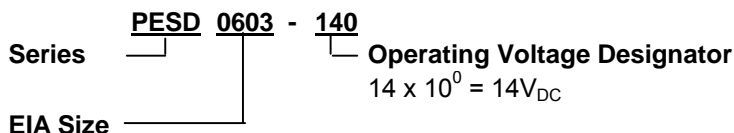
ROHS Compliant

Directive 2002/95/EC
Compliant

ELV Compliant

Directive 2000/53/EC
Compliant

PART NUMBERING



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



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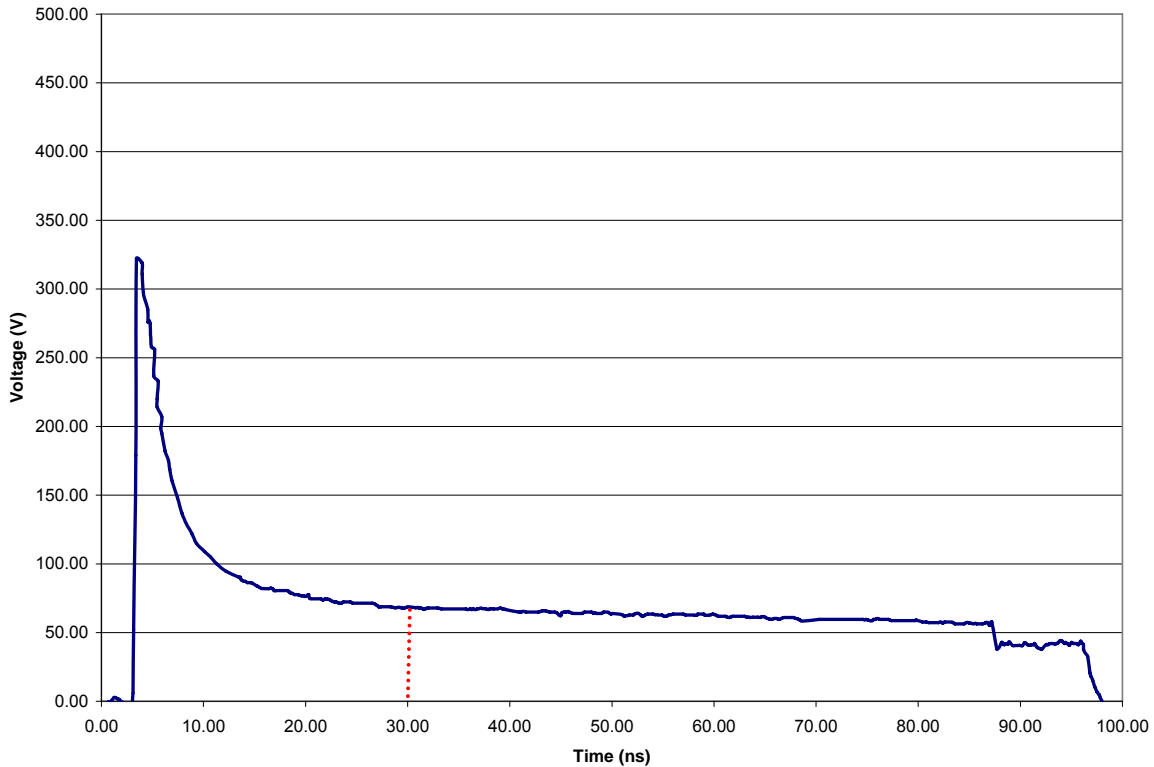
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TYPICAL TRANSMISSION LINE PULSE RESPONSE GRAPH





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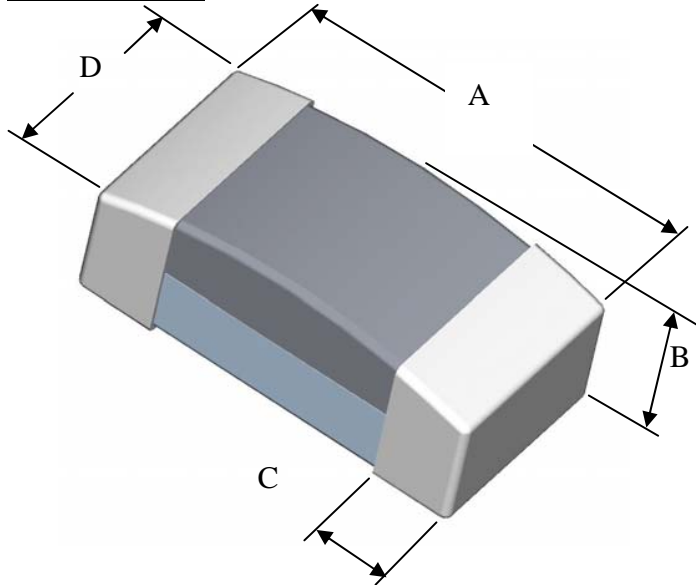
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DIMENSIONS



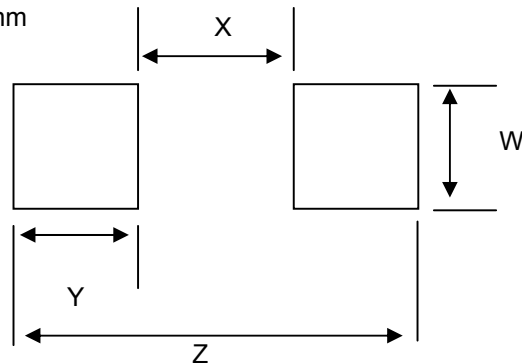
Drawing Not To Scale

	Length A		Height B		Terminal Width C		Width D	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
mm:	1.4	1.8	0.4	0.6	0.1	0.5	0.6	0.9
in*:	(0.055)	(0.071)	(0.016)	(0.024)	(0.004)	(0.02)	(0.024)	(0.035)

*Rounded off approximation

RECOMMENDED LAND PATTERN:

Solder thickness 0.15 to 0.2mm



	W		X		Y (Ref)		Z	
	Min	Max	Min	Max	Min	Max	Min	Max
mm:	0.9	1.0	0.5	0.6	1.0	1.1	2.7	2.8
in: *	(0.035)	(0.039)	(0.020)	(0.024)	(0.039)	(0.043)	(0.106)	(0.110)

*Rounded off approximation.



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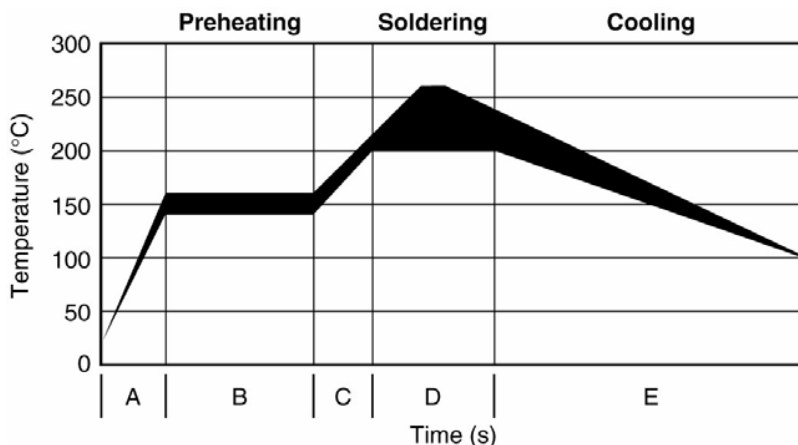
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SOLDER REFLOW RECOMMENDATIONS:

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





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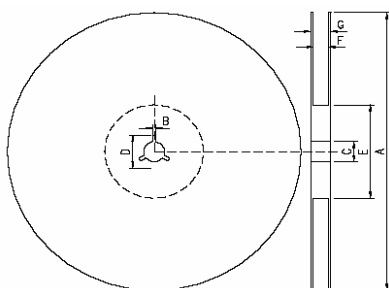
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PACKAGING

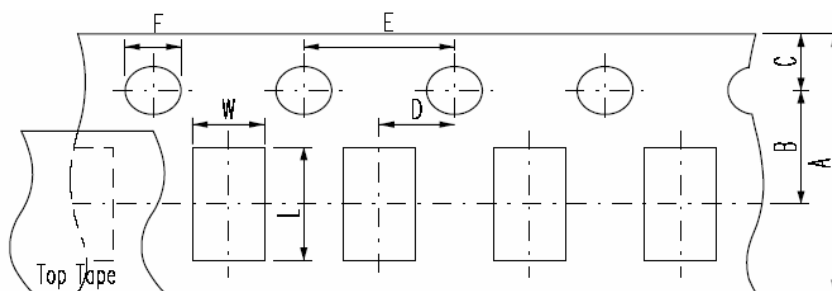
Packaging	Tape & Reel	Standard Box
PESD0603-140	5,000	25,000

EIA referenced Reel Dimensions for PESD Devices



Reel Dimensions (mm):

	A	B	C	D	E	F	G
0603 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
0603 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	1.9 ±0.2	1.1 ±0.20	0.60 ±0.05

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

Leader & Trailer: The leader is 180mm in length & consists of empty cavities with sealed cover tape. The trailer is 350mm in length & consists of empty cavities with sealed cover tape.



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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

Warning: Application Limitations for PESD0603-140. 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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