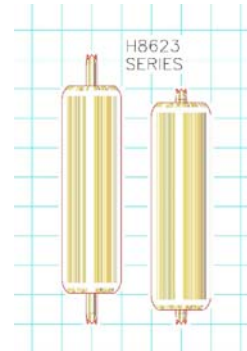


FEATURES

- <-1db insertion loss to 22.9GHz
- <2:1VSWR to 23.31GHz
- 34g operating spring force
- $Z_0 = 44.1\Omega$
- <27ps risetime
- 60milliOhms contact resistance
- 5.4 A max drive current
- .036 [0.91] travel



GENERAL DESCRIPTION

The H8623 series *Speed-In-A-Can* matched impedance spring probes from Signal Integrity Inc. are designed to meet the rigorous test requirements that are being driven by the continuing demand for shorter risetimes and greater RF bandwidths.

Along with speed and accuracy, the *Speed-In-A-Can* matched impedance spring probes are designed to match a 50 Ohm system. This design also eliminates mutual inductance, mutual capacitance and cross talk when using a good ground between probes. The resulting high bandwidth of the H8623 provides for low insertion loss up to 22.9GHz, and a -10db return loss well beyond 20GHz. These probes will provide transparent operation on all wireless devices, and exceed most test probe requirements for ASIC devices, microwave devices and system interconnects.

With an impulse risetime less than 27ps and a propagation delay of 31.5ps the H8623 *Speed-In-A-Can* matched impedance spring probe is designed to build transparent test channels and to provide interconnect solutions to address the signal performance needed in data communications and source synchronous memory busses.

SERIES H8623 ORDERING INFORMATION

H Series 1.27mm (.05inch) Pitch				
Model	Operating /Initial Length Inches [mm]	DUT Plunger and Plating	Spring	Operating Spring Force
H8623-D4	.253 [6.43] / .289[7.33]	Crown - Gold	Stainless Steel	34 Grams

FUNCTIONAL SPECIFICATIONS

Model	H8623-D4			
Time Domain	Min.	Typ.	Max.	Units
TDT Risettime into 50Ω			27	ps
TDR Risettime open circuit			43.5	ps
TDR Risettime short circuit			31.5	ps
Signal Delay into 50Ω		31.5		ps
Frequency Domain				
Insertion Loss <-1db	22.9			GHz
<-3db	25.9			GHz
Return Loss, S11 <-10db	>20.0			GHz
<-20db	5.0			GHz
VSWR <2:1	23.31			GHz
Equivalent Circuit Parameters				
Pin Inductance		1.40		nH
Pin Capacitance to ground		0.718		pF
Mutual Inductance		--		nH
Mutual Capacitance		--		pF
Transmission Line Zo		44.1		Ω
Tl		31.67		ps
DC Parameters				
Contact Resistance		60		mΩ
Maximum Rating				
Drive Current		5.4		A

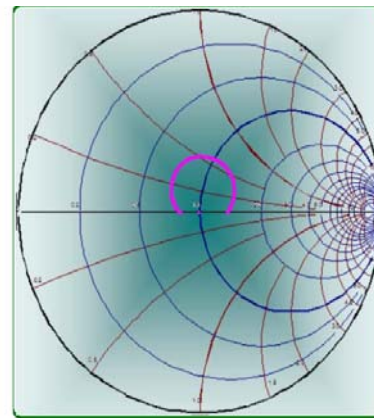


Figure 2: Measurement into 50Ω, H8623-D4

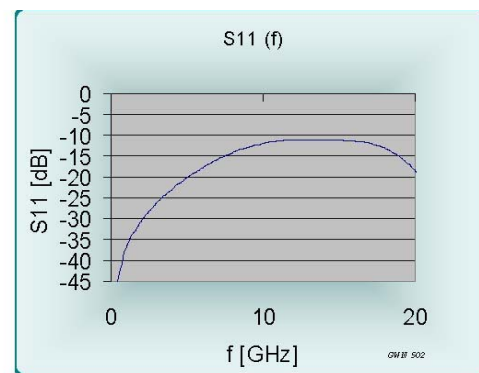


Figure 3: Return Loss, S11, H8623-D4

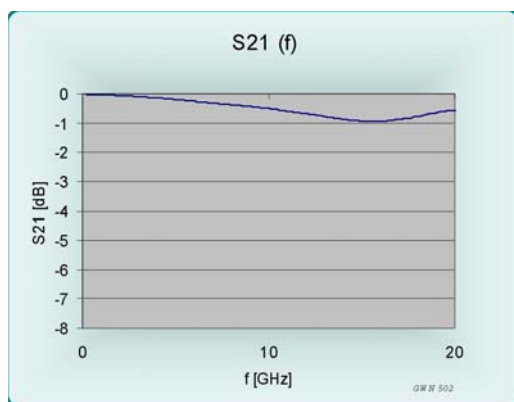


Figure 1: Insertion Loss, S21, H8623-D4

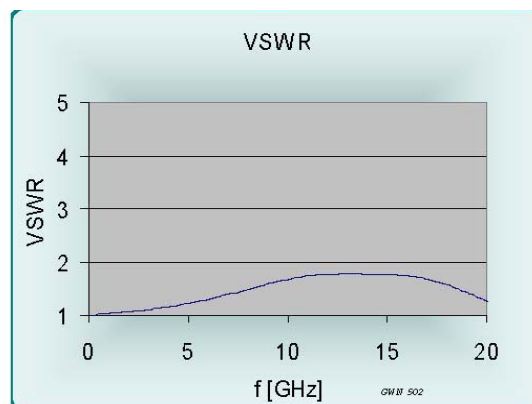
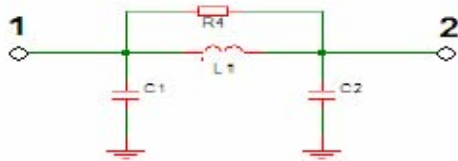


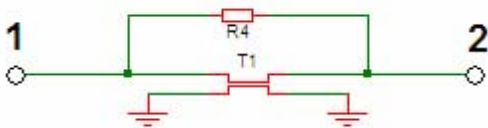
Figure 4: VSWR, H8623-D4

EQUIVALENT CIRCUITS / SPICE MODELS



C1, C2	0.359	pF
L1	1.40	nH
R4	1000	Ohms

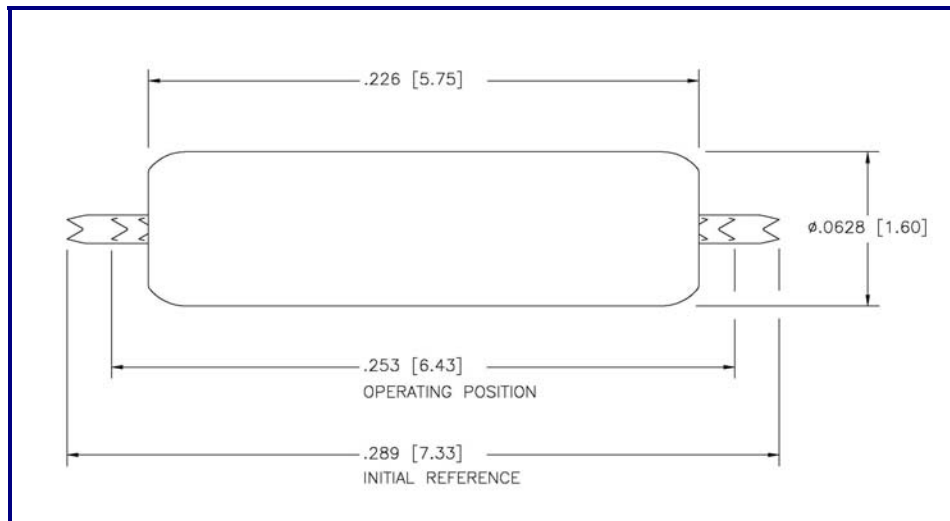
Figure 5: Lumped, Valid to 7GHz



Z0	44.1	Ohms
T1	31.67	ps
R4	1500	Ohms

Figure 6: Distributed Line

**MECHANICAL DIMENSIONS
INCHES [MM]**



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