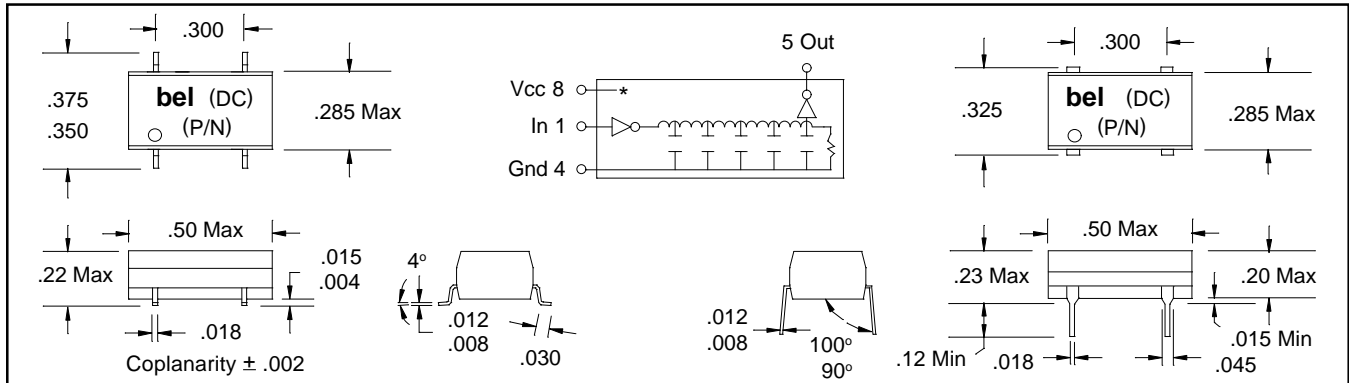




defining a degree of excellence

# 1 TAP LEADING EDGE CONTROL PRECISE DELAY MODULES

Cat 29-R1



### Part Numbers

SMD	Thru-Hole	Time Delay	Tolerance	Rise Time
S493-0005-06	A493-0005-06	5 ns	± 1.0 ns	3 ns
S493-0007-06	A493-0007-06	7 ns	± 1.0 ns	3 ns
S493-0010-06	A493-0010-06	10 ns	± 1.0 ns	3 ns
S493-0015-06	A493-0015-06	15 ns	± 1.0 ns	3 ns
S493-0020-06	A493-0020-06	20 ns	± 1.0 ns	3 ns
S493-0025-06	A493-0025-06	25 ns	± 1.0 ns	3 ns
S493-0030-06	A493-0030-06	30 ns	± 1.0 ns	3 ns
S493-0035-06	A493-0035-06	35 ns	± 1.1 ns	3 ns
S493-0040-06	A493-0040-06	40 ns	± 1.2 ns	3 ns
S493-0045-06	A493-0045-06	45 ns	± 1.4 ns	3 ns
S493-0050-06	A493-0050-06	50 ns	± 1.5 ns	3 ns
S493-0075-06	A493-0075-06	75 ns	± 2.3 ns	3 ns
S493-0100-06	A493-0100-06	100 ns	± 3.0 ns	3 ns

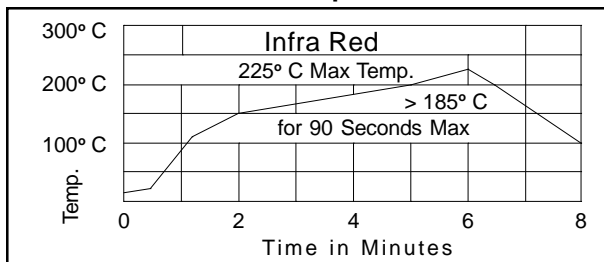
### Tolerances

Input to Output ± 1 ns or 3% , Whichever is Greater  
Delays measured @ 1.5 V levels on Leading Edge only  
with no loads on Output  
Rise and Fall Times measured from 0.75 V to 2.4 V levels

### Drive Capabilities

Nh	Logic 1 Fanout	-	10 TTL Loads Max.
Nl	Logic 0 Fanout	-	10 TTL Loads Max.

### Recommended Temperature Profile



### Test Conditions @ 25°C

Ein	Pulse Voltage	3.2 Volts
Trin	Rise Time	3.0 ns (10%-90%)
PW	Pulse Width	1.2 x Total Delay
PP	Pulse Period	4 x Pulse Width
Iccl	Supply Current	35 ma Typical
Vcc	Supply Voltage	5.0 Volts

### Electrical Characteristics

	Min.	Max.	Units
Vcc	Supply Voltage	4.75	5.25 V
Vih	Logic 1 Input Voltage	2.0	V
Vil	Logic 0 Input Voltage		V
Ioh	Logic 1 Output Current	0.8	ma
Iol	Logic 0 Output Current	-1	ma
Voh	Logic 1 Output Voltage	2.7	V
Vol	Logic 0 Output voltage	0.5	V
Vik	Input Clamp Voltage	-1.2	V
Iih	Logic 1 Input Current	20	ua
Iil	Logic 0 Input Current	-0.6	ma
Ios	Short Circuit Output Current	-60	-150 ma
Icch	Logic 1 Supply Current	25	ma
Iccl	Logic 0 Supply Current	40	ma
Ta	Operating Free Air Temperature	0°	70° C
PW	Min. Input Pulse Width of Total Delay	40	%
d	Maximum Duty Cycle	50	%
Tc	Temp. Coeff. of Total Delay (TD)	100 + (25000/TD)	PPM/°C

### Notes

Transfer molded for better reliability  
Compatible with TTL & DTL circuits  
Terminals: Electro-Tin plate phosphor bronze  
Performance warranty is limited to specified parameters listed  
SMD - Tape & Reel available:  
24mm Wide x 12mm Pitch, 750 pieces per 13" reel

## Other Delays and Tolerances Available Consult Sales

Specifications subject to change without notice.

#### Corporate Office

**Bel Fuse Inc.**  
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#### European Office

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