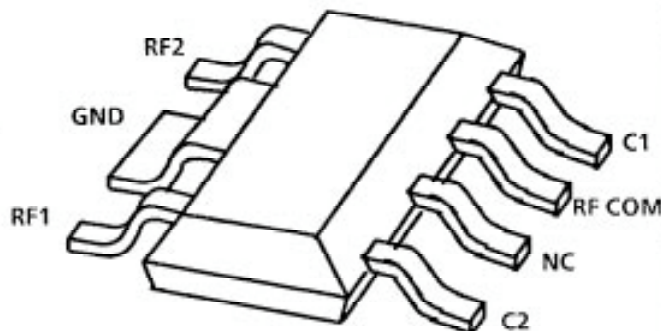


Preliminary data

- RF Switch up to 2 GHz
- Available in Chip Version up to 12 GHz
- 1 ns Rise/Fall Time
- Low Loss
- High Isolation
- High Input Power Capabilities



Type No.

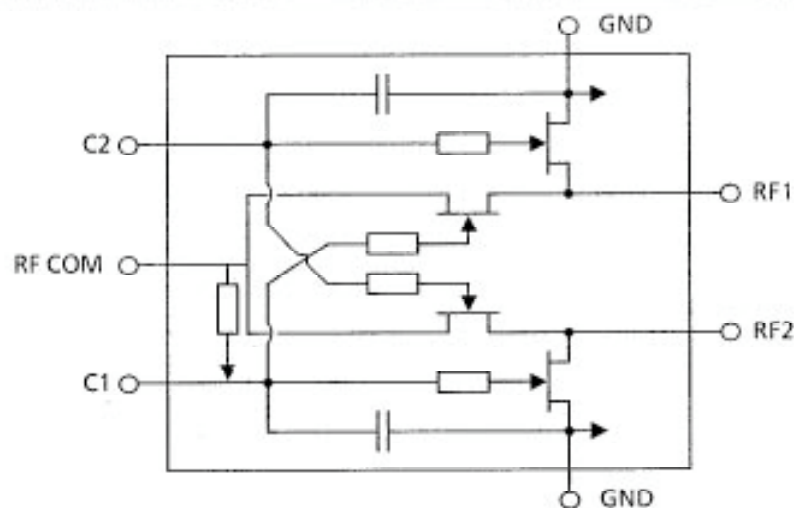
Marking

Ordering code, tape & reel

Package ¹⁾

CSY 10

MW-7

**Maximum ratings**

Channel temperature

 T_{ch}

150

°C

Storage temperature range

 T_{stg}

-55 to 150

°C

Control voltage

 V_C

-8

V

Input power (0,01 GHz)

 P_{in}

+ 22

dBm

(0,5 - 12 GHz)

 P_{in}

+ 29

dBm

Thermal resistance

Channel to soldering point (GND)

 R_{thChS}

≤

K/W

1) For detail dimensions see pg. 4

Electrical characteristics

at $T_a = 25^\circ\text{C}$ (All specifications apply with $50\ \Omega$ impedance at all parts with control Voltage $V_c = 0 / -5\ \text{V}_{dc}$, if not otherwise specified)

		min	typ	max	Units
Insertion Loss ($R_{Fin} - R_{F1or2}$)	L				dB
10 MHz		-	0.6	-	
450 MHz		-	0.7	-	
900 MHz		-	0.8	-	
1.8 GHz		-	1.2	-	
Isolation ($R_{Fin} - R_{F1or2}$)	I				dB
10 MHz		-	60	-	
450 MHz		-	35	-	
900 MHz		-	30	-	
1. GHz		-	22	-	
Return Loss	R				dB
10 MHz - 1000 MHz		-	14	-	
1.8 GHz		-	10	-	
Input power at which insertion loss compresses by 1 dB	$P_{in(-1dB)}$				dBm
10 MHz		-	17	-	
250 MHz		-	22	-	
900 MHz		-	26	-	
1.8 GHz		-	27	-	
Switching characteristics	t				ns
t_{rise}, t_{fall}		-	1	-	
t_{on}, t_{off}		-	2	-	

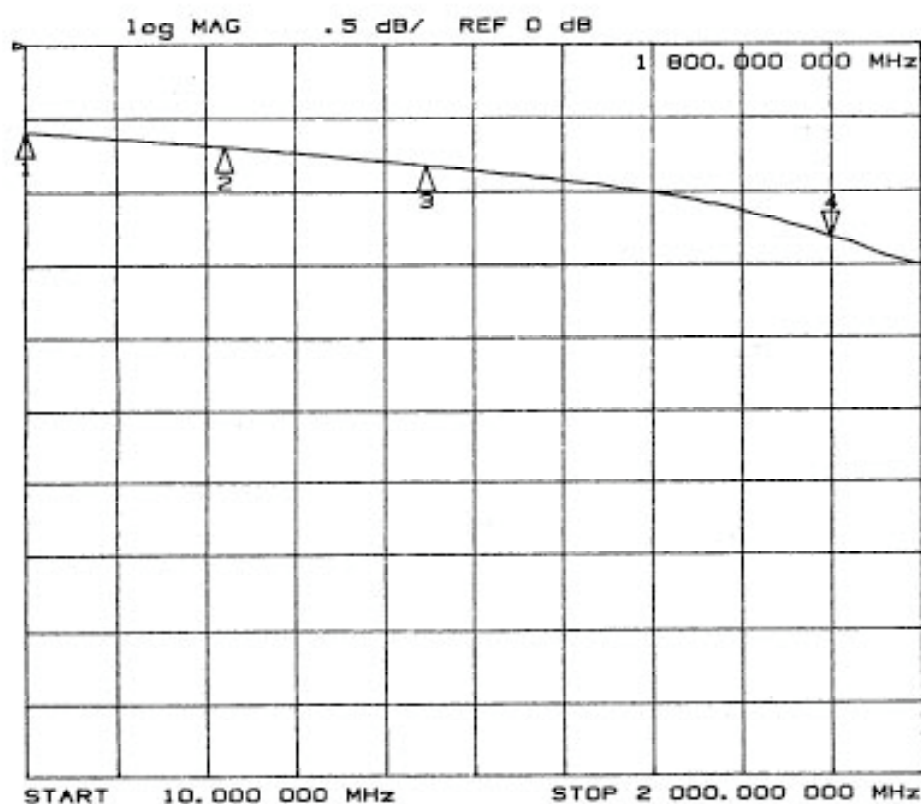
Truth Table

Control input		Condition of switch	
C1	C2	$R_{Fin} - R_{F1}$	$R_{Fin} - R_{F2}$
0 V	-5 V	off	on
-5 V	0 V	on	off

Electrical characteristics (Chip)

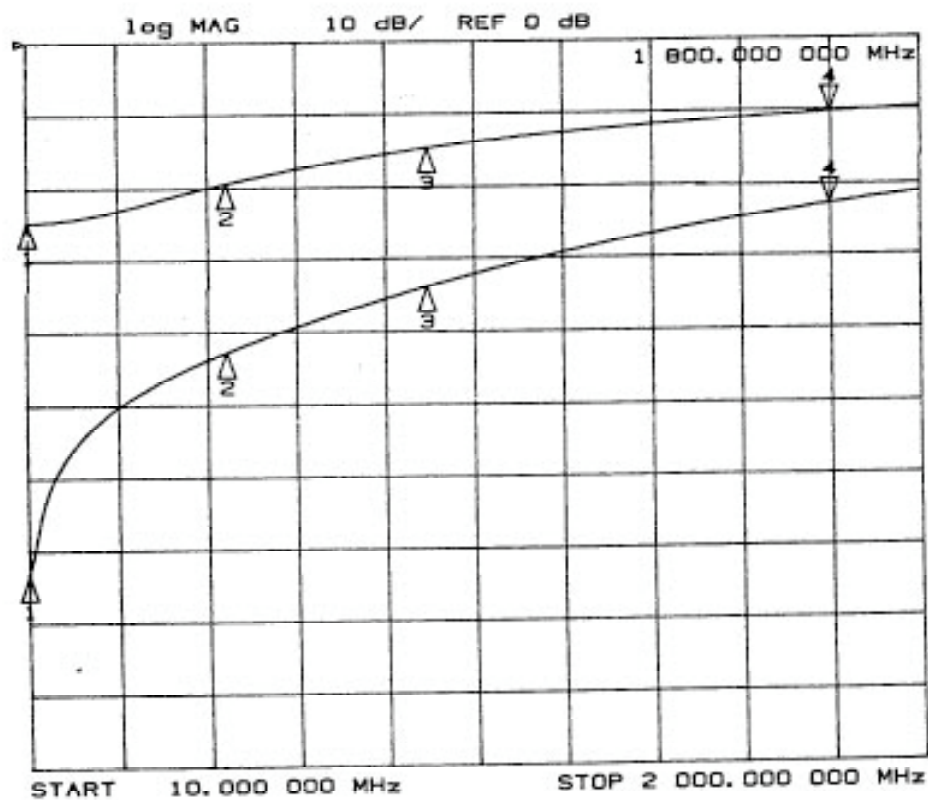
at $T_a = 25^\circ\text{C}$ (All specifications apply with $50\ \Omega$ impedance at all parts with control Voltage $V_C = 0 / -5\ \text{V}_{\text{dc}}$, if not otherwise specified)

		min	typ	max	Units
Insertion Loss ($R_{\text{Fin}} - R_{\text{F1or2}}$)	L				dB
1 GHz		-	0.8	-	
6 GHz		-	1	-	
12 GHz		-	1.6	-	
Isolation ($R_{\text{Fin}} - R_{\text{F1or2}}$)	I				dB
1 GHz		-	40	-	
6 GHz		-	32	-	
12 GHz		-	24	-	
Return Loss					dB
1 Hz		-	20	-	
6 GHz		-	15	-	
12 GHz		-	10	-	
Input power at which insertion loss compresses by 1 dB	$P_{\text{in}(-1\text{dB})}$				dBm
0,01 GHz		-	14	-	
0,5 - 12 GHz		-	18	-	
Switching characteristics	t				ns
$t_{\text{rise}}, t_{\text{fall}}$		-	1	-	
$t_{\text{on}}, t_{\text{off}}$		-	2	-	
Control voltages V_C , Leakage Current	c				μA
$V_{\text{CLow}}: 0\ \text{V to } -0,1\ \text{V}$		-	1	-	
$V_{\text{CHigh}}: -5\ \text{V to } -7,5\ \text{V}$		-	80	-	



Insertion Loss

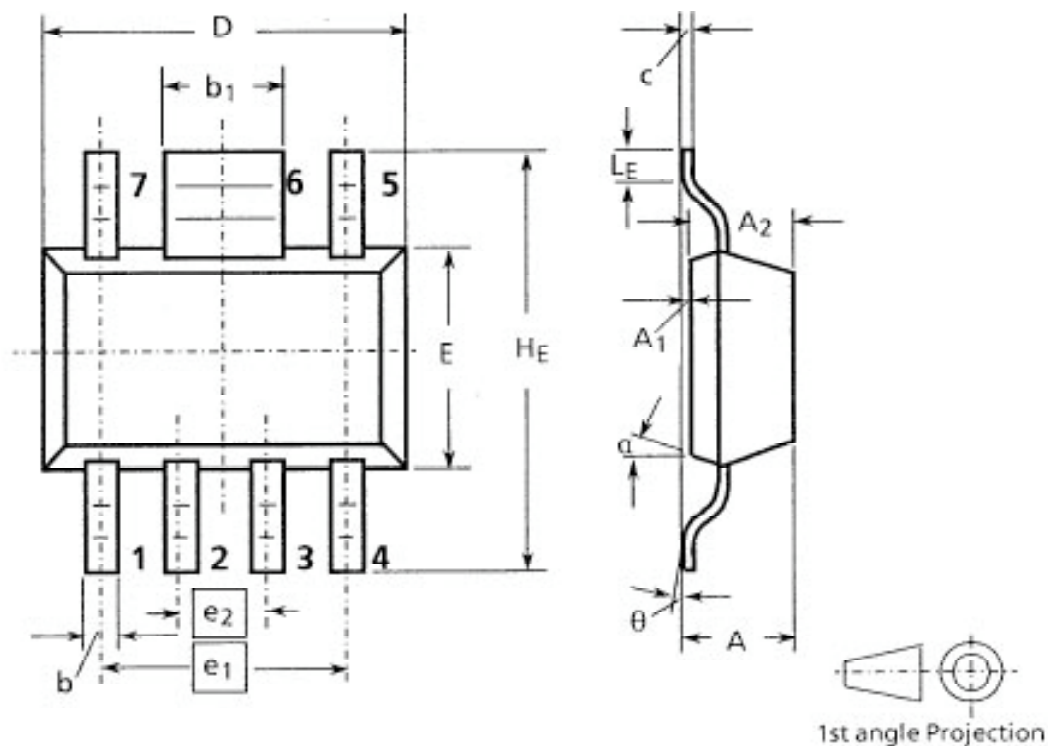
Marker 1	10 MHz
2	450 MHz
3	900 MHz
4	1800 MHz



Return Loss

Isolation

SEMICONDUCTOR DEVICE OUTLINE MW-7



Dim.	Millimeters			Gradient	Remark
	min.	nom.	max.		
A			1,8		
A ₁	0		0,1		
A ₂	1,5	1,6	1,7		
b		0,6			
b ₁	1,62	1,67	1,77		
c	0,24		0,32		
D	6,3		6,7		
E	3,3		3,7		
e ₁		3,81			
e ₂		1,27			
H _E	6,7		7,3		
L _E	0,5				
α				max 15°	1
θ				10°	

1.Applicable on all sides

Terminal identification

- 1 C2
- 2 NC
- 3 RF COM
- 4 C1
- 5 RF2
- 6 GND
- 7 RF1

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