Product data sheet

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Revision:	pre-5
Date:	30.06.2006
Signature:	TZ
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Part Number: **3926.99.0030.00´**

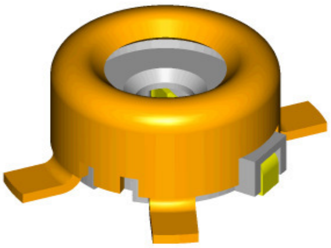
Description: **SMT-Switch**

ELECTRICAL CHARACTERISTICS

colored value means: still under test target value

		value		Unit	Remarks
Impedance (MIL-C-39012B)		50		[Ohm]	
Counter part:		3989.91.1420.01´			
Operation frequency		6		[GHz]	
		unswitched	switched		
Return loss	1GHz	> 30	> 30	[dB]	
	2GHz	> 28	> 24	[dB]	
	3GHz	> 27	> 21	[dB]	
	6GHz	> 16	> 16	[dB]	
Insertion loss	1GHz	< 0,15	< 0,20	[dB]	
	2GHz	< 0,20	< 0,30	[dB]	
	3GHz	< 0,25	< 0,40	[dB]	
	6GHz	< 0,50	< 1,0	[dB]	
Isolation:	1GHz	n/a	> 36	[dB]	
	2GHz	n/a	> 30	[dB]	
	3GHz	n/a	> 26	[dB]	
	6GHz	n/a	> 19	[dB]	
Contact resistance					
	Center contact	< 80	< 80	[mOhm]	
	Outer contact	< 50	< 50	[mOhm]	
Insulation resistance - initial > 0,50 Gohm		> 0,20		[Mohm]	after SMT-process / conditioning
Operation voltage		50		[V]	
Proof voltage		100		[V]	

Picture



Remarks

Attention: electrical values strongly depending on layout !
Reference-pcb: AGK-4001

MECHANICAL CHARACTERISTICS

	Value	Unit	Remarks
Engagement force	(approx. 10)	[N]	
Seperating force	(approx. 10)	[N]	
Maiting cycles	50	-	

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MATERIAL AND PLATING

	Material	Plating	
Housing	stainless steel	Ni + 0,2μm Au	
Spring	copper berylium	Ni + 0,5μm Au	
Stationary spring	bronze	Ni + 0,2μm Au	
Insulator	PPA	-	natural-white
-			
-			

ENVIROMENTAL

Low temperature storage	IEC 60068-2-1 / Ab	-40°C / 72 h	
High temperature storage	IEC 60068-2-2 / Bb	+85°C / 72 h	
Temperature change	IEC 60068-2-14 / Nb		
Damp heat cyclic	IEC 60068-2-30 / Db		
Vibration-broard band random	IEC 60068-2-64 / Fh		
Shock	IEC 60068-2-27 / Ea	60 g	
Bump	IEC 60068-2-29 / Eb	40 g	

Notes

Update historie

Rev.	date	Signature

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SMD - solderability acc. IPC/JEDEC J-STD-020C - Pb-Free Assembly

Table 4-1 SnPb Eutectic Process – Package Peak Reflow Temperatures

Package Thickness	Volume mm³ <350	Volume mm³ ≥ 350
<2.5 mm	240 +0/-5 °C	225 +0/-5°C
≥ 2.5 mm	225 +0/-5°C	225 +0/-5°C

Table 4-2 Pb-free Process – Package Classification Reflow Temperatures

Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
<1.6 mm	260 +0 °C *	260 +0 °C *	260 +0 °C *
1.6 mm - 2.5 mm	260 +0 °C *	250 +0 °C *	245 +0 °C *
≥2.5 mm	250 +0 °C *	245 +0 °C *	245 +0 °C *

* Tolerance: The device manufacturer/supplier **shall** assure process compatibility up to and including the stated classification temperature (this means Peak reflow temperature +0 °C. For example 260 °C+0°C) at the rated MSL level.

Table 5-2 Classification Reflow Profiles

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average Ramp-Up Rate (Ts_{max} to Tp)	3 °C/second max.	3° C/second max.
Preheat – Temperature Min (Ts_{min}) – Temperature Max (Ts_{max}) – Time (ts_{min} to ts_{max})	 100 °C 150 °C 60-120 seconds	 150 °C 200 °C 60-180 seconds
Time maintained above: – Temperature (T_L) – Time (t_L)	 183 °C 60-150 seconds	 217 °C 60-150 seconds
Peak/Classification Temperature (Tp)	See Table 4.1	See Table 4.2
Time within 5 °C of actual Peak Temperature (tp)	10-30 seconds	20-40 seconds
Ramp-Down Rate	6 °C/second max.	6 °C/second max.
Time 25 °C to Peak Temperature	6 minutes max.	8 minutes max.

Note 1: All temperatures refer to topside of the package, measured on the package body surface.

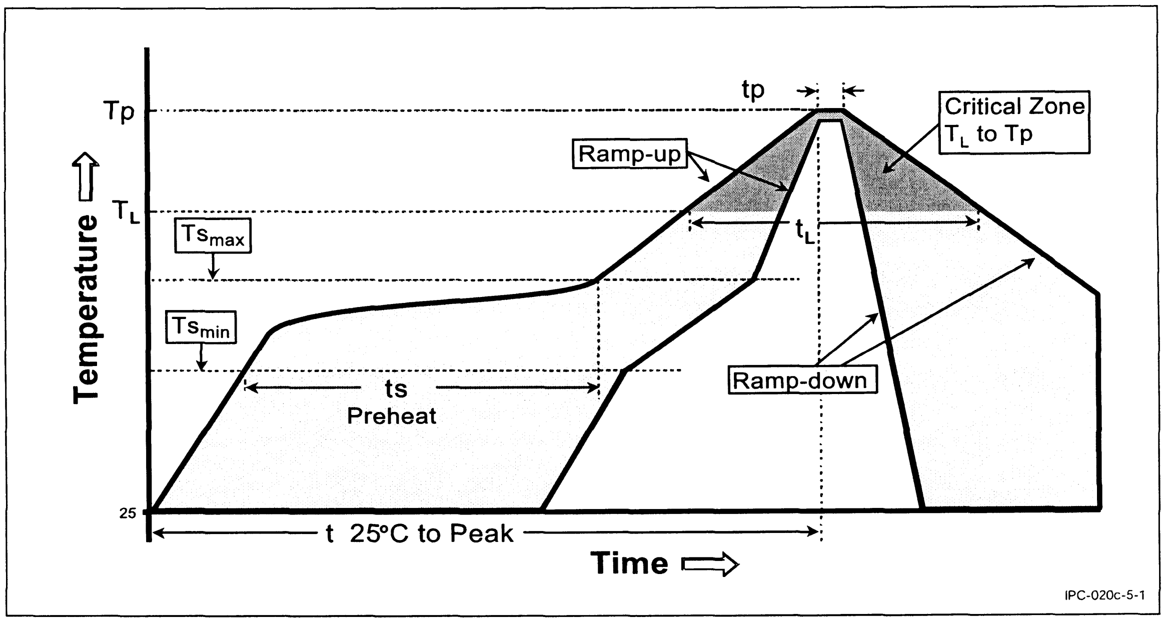

Figure 5-1 Classification Reflow Profile

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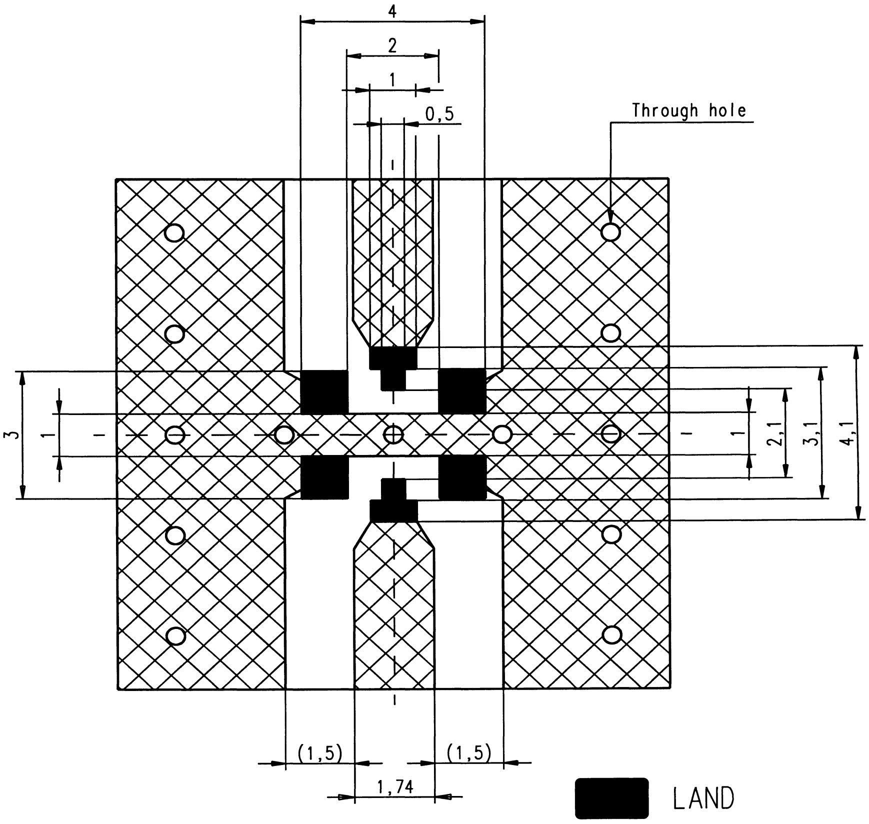
PCB-Layout



■ LAND

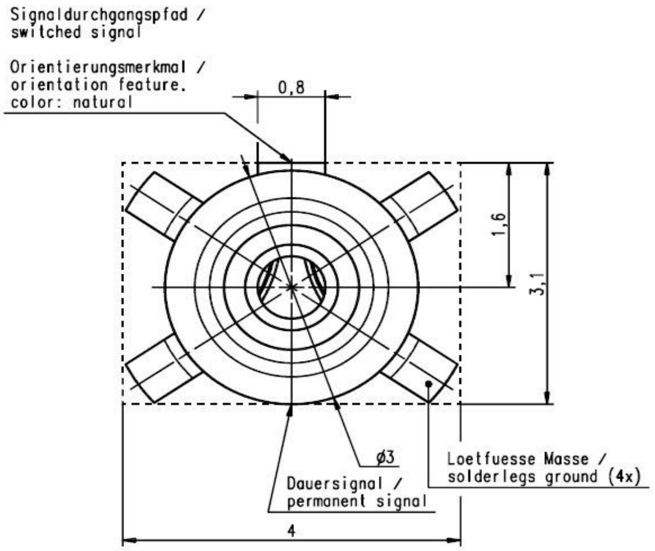
▨ ELECTRODE

Standard pattern dimensions

Please design I/O pattern so that the impedance match 50 ohm including the land pattern.

The material of PCB is the epoxy resin of grass fabric base. (εr = 4.8). Thickness is 1.0 mm.

The solder resist should be printed except for the land pattern on the PCB.



The standard solder cream metal mask drawing (Mask thickness 0,15 mm)