

**Reltronix Ltd**Trafalgar House
Tharston Industrial Estate
Norwich, Norfolk NR15 2PDwww.reltronix.comsales@reltronix.com

Tel: +44(0)1603 859640

MIL PRF 38534 CLASS H TRAVELLER

Customer:SiS	Cust PO#:	Cust Spec:
LQH #:049	Bonding Diagram#: DBD056	SO:
Device:2N4209	Device IIL:6581	Diff Lot: CD000002MN W-1
Bond Wire:Au	Package Style: TO39	Package IIL:6316
Die Attach Type:Ag	Lid Style: TO39 Cap	Lid IIL:6315

SEQ	OPERATION/PS	CONDITIONS	QTY	ACCEPT	REJ.	DATE	SIG.	COMMENTS
1	100% Die Visual QS011	MIL STD 883 TM 2010	15	15		24/06/24	SG	Equipment #:1
2	Die Attach PS0018	Cure Epoxy 1Hr @150°C Oven Temp Check:152°C	15	15		24/06/24	DPB	Equipment #:6
3	Wire Bond PS0020	Wire Type: Au Diameter: 1 Mils	15	15		25/06/24	DPB	Equipment #:7
4	Internal Visual QS0029	MIL STD 883 TM 2010	15	15		25/06/24	SE	Equipment #:1
5	Lid Seal PS 00010	Cure Epoxy 1Hr @150°C	15	15		26/06/24	SR	Equipment #:8 Oven Temp Check:152°C
6	100% Electrical Test +25°C	Manufacturers Datasheet	10	10		26/06/24	DPB	Equipment #:12 Program: 2N4209 25C.tsf
7	100% Electrical Test -55°C	Manufacturers Datasheet	10	10		27/06/24	DPB	Equipment #:12 Program: 2N4209 -55C.tsf

ALL ELECTRICAL TEST RESULTS ARE SUPPLIED ELECTRONICALLY

**Reltronix Ltd**Trafalgar House
Tharston Industrial Estate
Norwich, Norfolk NR15 2PDwww.reltronix.comsales@reltronix.com

Tel: +44(0)1603 859640

SEQ	OPERATION/PS	CONDITIONS	QTY	ACCEPT	REJ.	DATE	SIG.	COMMENTS
8	100% Electrical Test +125°C	Manufacturers Datasheet	10	10		27/06/24	DPB	Equipment #:12 Program: 2N4209 125C.tsf
9	Bond Pull Test Bake PS0005	MIL STD 883 TM2011 1hr 300°C bake	10	10		28/06/24	DPB	Equipment #:8 Oven Temp Check# 301°C
10	Bond Pull Test PS0006	MIL STD 883 TM2011 Attach Electronic Results to Folder	10	10		28/06/24	DPB	Equipment #:15 BPR:0061
11	Final QA QS0032	Check Test Records and Documentation	10	10		01/07/24	DSB	
12	Dispatch goods and Electronic Records to customer		1	1		01/07/24	RB	

ALL ELECTRICAL TEST RESULTS ARE SUPPLIED ELECTRONICALLY

2N4209

Device #	Result	1.1 VCE0(BR),IC=100uA, VBE=0V	2.1 VCES(BR)	3.1 VEB0	4.1 VCB0	5.1 VCE(sat),IB=0.1mA, IC=1mA	6.1 VCE(sat)	7.1 VBE(sat)	8.1 ICE0,VCE=- 5V,VBE=0	9.1 hfe,IC=1mA, VCE=-0.5V	10.1 hfe1(DC)	11.1 hfe2(DC)
Unit		V	V	mV	V	mV	mV	mV	nA			
Lower limit		15.000	15.000	4500.000	15.000	0.000	0.000	0.000		35.000	50.000	40.000
Upper limit		150.000	150.000	15000.000	150.000	150.000	180.000	800.000	10.000	400.000	500.000	500.000
1	Pass	18.81	18.41	6317.13	18.50	71.56	41.51	747.72	-2.01	77.72	77.42	52.62
2	Pass	18.59	18.90	6324.63	19.48	74.53	43.02	739.18	-2.29	78.24	78.02	53.08
3	Pass	17.93	18.30	6352.63	18.35	74.01	42.70	730.01	1.67	82.98	80.97	53.52
4	Pass	18.48	17.95	6341.38	18.03	73.51	42.42	741.45	-2.72	78.47	77.70	52.17
5	Pass	18.33	18.09	6348.56	18.03	74.28	42.30	733.39	-1.70	81.25	78.83	52.85
6	Pass	18.53	18.55	6329.38	18.57	72.89	42.86	738.74	-0.86	78.70	75.73	50.51
7	Pass	18.56	18.72	6331.13	18.72	74.52	42.99	734.57	-4.79	79.36	79.33	53.08
8	Pass	17.53	18.56	6331.75	18.43	72.94	41.94	740.10	3.58	77.15	78.27	52.64
9	Pass	18.53	18.74	6328.81	18.38	74.11	41.98	738.91	-0.47	81.48	76.99	52.62
10	Pass	18.42	18.68	6325.31	18.47	73.54	42.19	735.04	2.46	84.77	78.77	53.07

2N4209

Device #	Result	1.1 VCE0(BR),IC= 100uA,VBE=0 V	2.1 VCES(BR)	3.1 VEB0	4.1 VCB0	5.1 VCE(sat),IB=0.1 mA,IC=1mA	6.1 VCE(sat)	7.1 VBE(sat)	8.1 ICE0,VCE=- 5V,VBE=0V	9.1 hfe,IC=1mA, VCE=-0.5V	10.1 hfe1(DC)	11.1 hfe2(DC)
Unit		V	V	mV	V	mV	mV	mV	nA			
Lower limit		15.000	15.000	4500.000	15.000	0.000	0.000	0.000		35.000	50.000	40.000
Upper limit		150.000	150.000	15000.000	150.000	150.000	180.000	800.000	1000	400.000	500.000	500.000
1	Pass	19.28	19.62	6450.75	19.27	82.17	48.51	616.24	35.51	129.94	93.83	54.01
2	Pass	19.66	19.99	6450.06	19.44	83.08	48.59	616.33	51.42	131.08	92.54	53.52
3	Pass	19.80	19.83	6427.75	19.67	83.47	48.44	638.82	42.96	120.06	90.83	54.71
4	Pass	19.32	19.53	6454.56	18.96	82.14	48.49	615.23	58.57	128.86	93.08	53.99
5	Pass	19.52	19.65	6456.56	19.20	82.61	48.64	612.04	46.33	126.14	90.34	51.55
6	Pass	18.50	18.66	6430.81	18.53	80.58	46.69	664.46	43.38	110.89	89.32	55.41
7	Pass	18.95	19.13	6457.56	18.89	82.31	47.93	630.11	49.08	120.82	92.69	54.46
8	Pass	19.72	19.93	6463.00	19.58	84.71	49.74	595.97	75.89	131.73	91.71	51.99
9	Pass	19.23	19.51	6415.19	19.18	79.84	46.56	657.35	85.56	94.32	90.91	55.34
10	Pass	19.24	19.26	6380.31	18.95	78.63	45.28	689.83	34.39	94.94	86.15	55.43

2N4209

Device #	Result	1.1 VCE0(BR),I C=100uA,VB	2.1 VCES(BR)	3.1 VEB0	4.1 VCB0	5.1 VCE(sat),IB= 0.1mA,IC=1	6.1 VCE(sat) -	7.1 VBE(sat)	8.1 ICE0,VCE=- 5V,VBE=0V	9.1 hfe,IC=1mA, VCE=-0.5V	10.1 hfe1(DC)	11.1 hfe2(DC)
Unit		V	V	mV	V	mV	mV	mV	nA			
Lower limit		15.000	15.000	4500.000	15.000	0.000	0.000	0.000		35.000	50.000	40.000
Upper limit		150.000	150.000	15000.000	150.000	150.000	180.000	950	10.000	400.000	500.000	500.000
1	Pass	16.07	18.24	6248.13	18.22	68.02	39.62	803.84	0.70	50.69	64.48	46.02
2	Pass	18.14	17.86	6211.63	17.87	64.73	37.93	829.96	-3.11	53.89	57.18	41.21
3	Pass	16.97	17.78	6206.44	18.59	63.42	37.70	831.99	-5.56	59.15	58.13	41.88
4	Pass	16.57	17.91	6272.06	18.23	67.33	39.56	792.68	-5.38	54.48	64.51	44.81
5	Pass	16.22	17.64	6268.06	17.76	67.24	39.36	801.64	-6.04	48.10	64.88	46.02
6	Pass	16.06	17.92	6236.00	18.36	66.36	38.69	806.33	0.55	51.05	64.06	45.61
7	Pass	18.96	17.81	6243.31	17.91	65.51	38.50	808.69	-1.72	68.50	63.23	44.81
8	Pass	18.25	17.38	6237.00	18.16	65.43	38.18	821.58	-0.51	56.60	59.59	42.58
9	Pass	18.49	18.43	6263.81	18.45	69.04	40.26	788.14	0.66	74.20	68.06	48.19
10	Pass	17.81	17.90	6234.38	18.21	66.06	38.93	810.89	-0.23	67.36	62.36	44.43

Part #	2N4209	Date	26 th June2024
Sample Qty	5	Bond Type	Ball
Wire Size	25μ	Wire Type	Au
Min allowable strength	2.5gm	BPR	0061
Customer	SIS	Customer PO- SO	
Batch #	LQH0049	Equipment	XYZTEC

SN: 11			SN: 12			SN: 13			SN:14			SN:15					
#	F	C	#	F	C	#	F	C	#	F	C	#	F	C	#	F	C
1	3.63	8	3	3.73	8	5	4.39	8	7	3.6	8	9	3.92	8			
2	3.54	8	4	3.69	8	6	3.99	8	8	3.42	8	10	3.75	8			

F=Pull Strength in gms C=Failure Code

CODES

1. No Wire Break
2. Bond lift from Die
3. Bond lift from Post
4. Wire breaks at Heal
5. Die Metallisation delaminates
6. No Connection
7. Wire Breaks from Die
8. Bond Breaks at span