MODEL：SDM30-24S15

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 100 mVp-p (Max)	I/P: 24 VDC O/P:FULL LOAD Ta:25℃	V1: 15 mVp-p (Max)	P
2	OUTPUT VOLTAGE TOLERANCE	V1: +2 %~ -2 % (Max)	I/P: 18 VDC / 36 VDC O/P:FULL/ MIN LOAD Ta:25℃	V1: 0.15 %~ -0.15 %	P
3	LINE REGULATION	V1: +1 %~ -1 % (Max)	I/P: 18 VDC ~ 36 VDC O/P:FULL LOAD Ta:25℃	V1:0.04 %~ -0.04 %	P
4	LOAD REGULATION	V1: +1 %~ -1 % (Max)	I/P: 24 VDC O/P:FULL ~MIN LOAD Ta:25℃	V1: 0.12 %~ -0.12 %	P
5	OVER/UNDERSHOOT TEST	＜±5%	I/P: 24 VDC O/P:FULL LOAD Ta:25℃	TEST: ＜5 %	P
6	DYNAMIC LOAD	V1: 1500 mVp-p	I/P: 24 VDC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	275 mVp-p	P
7	TRI M OUTPUT	V1: 10% output voltage (Typ)	I/P: 24 VDC O/P:FULL LOAD Ta:25℃	V1: 16.47V	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	18VDC~ 36 VDC	I/P:TESTING O/P:FULL LOAD Ta:25℃	13 V~ 36 V	P
			I/P: LOW-LINE-3V= 15 VDC HIGH-LINE+3%= 37 VDC O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN (AC POWER ON/OFF NO DAMAGE)	TEST: OK	
2	EFFICIENCY	83 % (TYP)	I/P: 24 VDC O/P:FULL LOAD Ta:25℃	83.8 %	P
3	INPUT CURRENT	24 V/ 2 A (TYP)	I/P: 24 VDC O/P:FULL LOAD Ta:25℃	I = 1.46A	P
4	IDEL CURRENT	30mA / 24 VDC	I/P: 24 VDC O/P:Min LOAD Ta:25℃	I =20 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	> 105 %	I/P: 24 VDC O/P:TESTING Ta:25℃	126 %/ 24 VDC Over power limiting, recovers automatically after fault condition is removed	P
2	OVER VOLTAGE PROTECTION	CH1: 17.25V~ 22.5 V	I/P: 24 VDC I/P: 18 VAC O/P:MIN LOAD Ta:25℃	20.2 V/ 24 VDC 20.2 V/ 18 VDC Shut off o/p voltage, clamping by zener diode	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 36 VDC O/P: 100% LOAD Ta:25℃	NO DAMAGE Constant current limiting, recovers automatically after fault condition is removed	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	ON/OFF CONTROL	Logic * 1 * or Open POWER ON Logic * 0 * or Short POWER OFF	I/P: 24VDCO/P:FULL LOAD Ta:25℃	Logic * 1 * or Open POWER ON Logic * 0 * or Short POWER OFF	P

ENVIRONMENT TEST

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>SPECICATION</th><th>TEST CONDITION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>1</td><td>TEMPERATURE RISE TEST</td><td colspan="3">MODEL： SDM30-24S5
1. ROOM AMBIENT BURN-IN： 87 HRS
I/P: 24 VDC O/P: 100% LOAD Ta= 27.2 ℃
2. HIGH AMBIENT BURN-IN： 15 HRS
I/P: 24 VDC O/P: 100% LOAD Ta= 48.6 ℃

<table>
<tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 27.2 ℃</th><th>HIGH AMBIENT Ta= 48.6 ℃</th></tr>
<tr><td>1</td><td>U1</td><td>MIC38C43BM</td><td>79.0℃</td><td>95.4℃</td></tr>
<tr><td>2</td><td>Q2</td><td>BJT BCX56 1A/80V</td><td>80.6℃</td><td>96.8℃</td></tr>
<tr><td>3</td><td>Q3</td><td>BJT 2SA1797 –2A/-50V</td><td>80.5℃</td><td>97.2℃</td></tr>
<tr><td>4</td><td>L3</td><td>TR 273</td><td>81.2℃</td><td>97.3℃</td></tr>
<tr><td>5</td><td>L2</td><td>DRS001A</td><td>78.0℃</td><td>94.3℃</td></tr>
<tr><td>6</td><td>D1</td><td>SMD EC11FS2-TE12L</td><td>80.3℃</td><td>96.5℃</td></tr>
<tr><td>7</td><td>C52</td><td>C/E 470u/10V</td><td>79.4℃</td><td>95.5℃</td></tr>
<tr><td>8</td><td>C54</td><td>C/E 33u/10V</td><td>83.3℃</td><td>99.6℃</td></tr>
<tr><td>9</td><td>D50</td><td>SBD DF30SC4M 30A/40V</td><td>84.4℃</td><td>100.4℃</td></tr>
<tr><td>10</td><td>T1core</td><td>CT TS013</td><td>81.6℃</td><td>97.7℃</td></tr>
<tr><td>11</td><td>T1coil</td><td>CT TS013</td><td>83.3℃</td><td>99.8℃</td></tr>
<tr><td>12</td><td>C5</td><td>105/50V</td><td>79.0℃</td><td>95.2℃</td></tr>
<tr><td>13</td><td>L1</td><td>DRS003B</td><td>79.9℃</td><td>96.3℃</td></tr>
<tr><td>14</td><td>T2</td><td>CT TS013</td><td>81.3℃</td><td>97.6℃</td></tr>
<tr><td>15</td><td>Q1</td><td>FET CEB</td><td>82.6℃</td><td>99.1℃</td></tr>
</table>
</td><td>P</td></tr>
<tr><td>2</td><td>OVER LOAD BURN-IN TEST</td><td>NO DAMAGE
1 HOUR (MIN)</td><td>I/P: 24 VDC
O/P: 120 % LOAD
Ta:25℃</td><td>TEST： OK</td><td>P</td></tr>
<tr><td>3</td><td>LOW TEMPERATURE
TURN ON TEST</td><td>TURN ON AFTER 2 HOUR</td><td>I/P: 24 VDC
O/P: 100 % LOAD
Ta= -8.8 ℃</td><td>TEST： OK</td><td>P</td></tr>
<tr><td>4</td><td>HIGH HUMIDITY
HIGH TEMPERATURE
HIGH VOLTAGE
TURN ON TEST</td><td>AFTER 12 HOURS
IN CHAMBER ON
CONTROL 25 ℃
NO DAMAGE</td><td>I/P: 36 VDC
O/P:FULL LOAD
Ta= 25 ℃
HUMIDITY= 95 %R.H</td><td>TEST： OK</td><td>P</td></tr>
<tr><td>5</td><td>TEMPERATURE
COEFFICIENT</td><td>± 0.03 %(0~50℃)</td><td>I/P: 24 VDC
O/P:FULL LOAD</td><td>± 0.01 %(0~50℃)</td><td>P</td></tr>
</table>

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 1 KVDC/min	I/P-O/P: 1.2 KVDC/min Ta:25℃	I/P-O/P: 0.002 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P: 500 VDC Ta:25℃	I/P-O/P: 1.2G Ω NO DAMAGE	P

M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 322.4K HRS			P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2000/09/09	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2002/12/7	PRODUCT SAMPLE A211A14	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023