
1. EV Specification / Tune Procedure

This specification contains only the information required for electronic adjustment of the TEMPEST handset. The specification contains two sections; the adjustment procedure, and the adjustment range and configuration matrix.

Adjustment Procedure – Gives a detailed description of each adjustment of the handset in the required sequence.

Adjustment Range and Configuration Matrix – Gives the adjustment parameter, adjustment limits, and default EV value, and brief equipment set up for each adjustment.

1.1. Electronic Adjustment Support – Overview

TEMPEST will support electronic adjustment of various audio and RF related parameters through an external test set by putting the radio into adjust mode. This document covers the adjustment procedure using the external test set. All adjustments are typically done using channel 350 in the cellular band or channel 1000 in the PCS band unless otherwise specified with the transceiver and audio control set as required for the adjustment. The TEMPEST electronic adjustment allows for the setting of the following parameters:

- AFC Tuning
- RF RX DC Calibration
- RF TX DC Calibration
- Power Level
- Compressor Reference Level
- Standard Deviation
- SAT Deviation
- WBD / ST Deviation
- DTMF Deviation
- Discriminator Tuning
- Expander Reference Level
- RX Audio Level
- RSSI Calibration
- Battery Reference Voltage Calibration

1.2. Test Set Adjustment Operation

The test set originated adjustments generally operate as follows:

1. Commands are sent as 9600 baud asynchronous serial data with 8 data bits, even parity. Commands are received on the RX data line and responses are sent on the TX data line. All commands are sent through the serial bus in the following format (in hex):

00 80 NN CC (D1) (D2) (D3) ... (Dn)

where NN is the number of bytes sent (command plus data), CC is the command op code, and D1 through Dn are data associated with the command (see individual command below for number of data bytes expected).

2. The adjust mode is entered by first sending the *Test Mode* and then sending the *Adjust Mode* command.

TUNE INFORMATION

Page 1 of 25

3. A set adjustment command (such as *Set SAT*) is sent to set up the hardware for the specified test with the current adjustment.
4. The *Set Current Adjustment Value* command is issued along with a value which is used to set the selected adjustment and update the hardware. This may be repeated as necessary until the final adjustment value is determined.
5. The *Exit Adjustment Mode* command is issued to exit adjustment mode with the option to save all adjustments to nonvolatile memory. Handset returns to test mode.
6. The *Exit Active Adjustment Mode* command is issued to exit the current adjustment with the option to save to active memory. Handset is still in adjustment mode.
7. When all adjustments are complete, the *Normal Mode* command can be sent to return the unit to normal operation.
8. ALL RF POWERS LISTED ARE **NOT** CORRECTED FOR THE INTERNAL TRANSMISSION LINE PATH LOSS. ADD 1.2 dB TO ALL RF POWERS IN THE CELLULAR BAND AND 2.2 dB TO ALL RF POWERS IN THE PCS BAND TO COMPENSATE FOR THE INTERNAL TRANSMISSION LINE PATH LOSS.
9. Adjustments must be performed at $+25 \pm 5$ °C in the order specified. Adjustments performed outside the temperature range may produce erroneous results.
10. The following two groups of adjustments are to be done in the order listed: Adjustments performed out of this order may produce erroneous results.

Group A: Compressor Reference Level, then Standard Deviation, and then SAT, WBD, and DTMF Deviation

Group B: Discriminator Tuning, then Expander Reference Level, and then RX Audio Level

1.3. Enter Adjust Mode

Use this command to put the unit under test (UUT) into adjust mode. This must be done before issuing any other adjust commands.

1. Apply DC power (7.0 VDC) to DC-PWR-IN at the I/O connector of the UUT.
2. Send Enter Test Mode command and then send Adjust Mode command.

1.4. Adjust AFC Tuning Voltage

This procedure adjusts the AFC center value and the AFC scale factor.

1. Send Adjust AFC Control command.
2. Adjust AFC center value to 1.4 volts.
3. Send Set Current Adjustment Value with data: 130 for center value and 46 for scale factor
4. Measure the frequency of the transmitter at the RF port of the I/O connector.
5. Adjust AFC center value to 1.5 volts.
6. Send Set Current Adjustment Value with data: 140 for center value and 46 for scale factor
7. Measure the frequency of the transmitter at the RF port of the I/O connector.
8. Calculate AFC scale factor as follows:
TX AFC scale factor (Hz / bit) = [Frequency (1.5 volts) – Frequency (1.4 volts)] / 10
AFC scale factor = Integer [880500000/Ch frequency * TX AFC scale factor]
9. Check to insure the AFC scale factor is in the range of 16 to 64 Hz. If it is not in range, skip to step 12 and discard settings.
10. Calculate AFC center value as follows:
AFC center value = 130 + [Ch frequency – Frequency (1.4 volts)] / [TX AFC scale factor]
11. Send Set Current Adjustment Value with data: AFC center value (0 to 255), AFC scale factor (16 to 64)
12. Send Exit Active Adjustment Mode command with data: Save (1).

1.5. RF RX I/Q DC Calibration

This procedure calibrates the A/D converters of the RX I and Q channels in the IFIC including the RF and demodulator circuits.

1. Apply –50 dBm, $\pi/4$ shifted DQPSK signal, data = PN9, in the cellular band on ch 350 into the RF port of the I/O connector.
2. Send RFRxDC Adjustment command with data:
Offset average limits ($\pm 1, \pm 2, \pm 3$)
Number of reports to average (1 ~ 10)
Maximum number iterations (0 ~ 5)
3. Send Exit Active Adjustment Mode command with data: Save (1).

1.6. RF TX I/Q DC Calibration

This procedure calibrates the D/A converters of the TX I and Q channels in the IFIC including the RF and modulator circuits.

1. Connect a TDMA communications analyzer or a spectrum analyzer to the RF port of the I/O connector.
2. Send RFTxDC Adjustment command.
3. Measure the origin offset or the carrier suppression of the signal at the I/O RF port.
4. Adjust the TX I and Q DC offsets to achieve origin offset < -26 dB or carrier suppression of > 26 dB.

Send Set Current Adjustment Value with data: TX I DC Offset Correction (-128 to 127), TX Q DC Offset Correction (-128 to 127)
5. Send Exit Active Adjustment Mode command with data: Save (1).

1.7. Adjust Power Levels

This procedure adjusts the UUT power output for PL2 through PL7 in the cellular band for AMPS mode, the UUT power output for PL2 through PL10 in the cellular band for TDMA mode, and the UUT power output for PL2 through PL10 in the PCS band for TDMA mode.

1. Connect a power meter capable of measuring CW and average burst power to the RF port of the I/O connector.
2. Send Adjust Select Power Level command with data: Mode / Band, Channel, Power Level, Index.
3. Measure output power at the I/O RF port.
4. Adjust power per the following tables (powers listed do not include transmission line path loss).

Send Set Current Adjustment Value with data: (0 to 255)

AMPS Mode Cellular Band

PL	Adjust to: (dBm)				
	Channel 990	Channel 175	Channel 383	Channel 592	Channel 799
2	26.8 +0.5/-0.5	26.8 +0.5/-0.5	26.8 +0.5/-0.5	26.5 +0.5/-0.5	26.5 +0.5/-0.5
3	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5
4	Not Required	Not Required	19.8 +0.5/-0.5	Not Required	Not Required
5	Not Required	Not Required	15.8 +0.5/-0.5	Not Required	Not Required
6	Not Required	Not Required	11.8 +0.5/-0.5	Not Required	Not Required
7	Not Required	Not Required	7.8 +0.5/-0.5	Not Required	Not Required

TDMA Mode Cellular Band

PL	Adjust to: (dBm)				
	Channel 990	Channel 175	Channel 383	Channel 592	Channel 799
2	27.0 +0.3/-0.3	27.0 +0.3/-0.3	27.0 +0.3/-0.3	26.7 +0.3/-0.3	26.7 +0.3/-0.3
3	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5
4	Not Required	Not Required	19.8 +0.5/-0.5	Not Required	Not Required
5	Not Required	Not Required	15.8 +0.5/-0.5	Not Required	Not Required
6	Not Required	Not Required	11.8 +0.5/-0.5	Not Required	Not Required
7	Not Required	Not Required	7.8 +0.5/-0.5	Not Required	Not Required
8	Not Required	Not Required	2.8 +1.0/-1.0	Not Required	Not Required
9	Not Required	Not Required	-2.2 +1.0/-1.0	Not Required	Not Required
10	Not Required	Not Required	-7.2 +1.0/-1.0	Not Required	Not Required

TDMA Mode PCS Band

PL	Adjust to: (dBm)				
	Channel 1	Channel 500	Channel 1000	Channel 1500	Channel 1999
2	27.0 +0.3/-0.3	27.0 +0.3/-0.3	27.0 +0.3/-0.3	27.0 +0.3/-0.3	27.0 +0.3/-0.3
3	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5	23.8 +0.5/-0.5
4	Not Required	Not Required	19.8 +0.5/-0.5	Not Required	Not Required
5	Not Required	Not Required	15.8 +0.5/-0.5	Not Required	Not Required
6	Not Required	Not Required	11.8 +0.5/-0.5	Not Required	Not Required
7	Not Required	Not Required	7.8 +0.5/-0.5	Not Required	Not Required
8	Not Required	Not Required	1.8 +1.0/-1.0	Not Required	Not Required
9	Not Required	Not Required	-3.2 +1.0/-1.0	Not Required	Not Required
10	Not Required	Not Required	-8.2 +1.0/-1.0	Not Required	Not Required

5. Send Exit Active Adjustment Mode command with data: Save (1).
6. Repeat above steps for all channels and power levels listed in the tables above.

1.8. Adjust Compressor Reference Level

This adjustment sets the transmitter compressor input and output reference levels so that the modulation output is at the specified deviation.

1. Connect a modulation analyzer to the RF port of the I/O connector.
2. Send Adjust Compressor Reference Level command.
3. Apply 1004 Hz, -20 dBv (100 mVrms) to TX audio at the I/O connector.
4. Measure the FM deviation of the signal at the RF port of the I/O connector with a modulation analyzer.
Set the high pass filter to 300 Hz and the low pass filter to 3 kHz.
5. Send Compandor Off and then Compandor ON command.
6. Measure the difference in FM deviation between Compandor Off and Compandor On.
7. Adjust TXGAIN (ATT1) in the CODEC to achieve a difference of less than 0.1 kHz of FM deviation.
If FM Deviation (Compandor Off) > FM Deviation (Compandor On) then increase ATT1.
If FM Deviation (Compandor Off) < FM Deviation (Compandor On) then decrease ATT1.
8. Send Set Current Adjustment Value with data: ATT1 (0 to 31)
9. Send Exit Active Adjustment Mode command with data: Save (1).

1.9. Adjust Standard Deviation

This adjustment sets the transmitter modulation output at the specified deviation. **The Compressor Reference Level must be adjusted prior to this adjustment.**

1. Connect a modulation analyzer to the RF port of the I/O connector.
2. Send Adjust Standard Deviation command.
3. Apply 1004 Hz, -20 dBv (100 mVrms) to TX audio at the I/O connector.
4. Measure the FM deviation of the signal at the RF port of the I/O connector with a modulation analyzer.
Set the high pass filter to 300 Hz and the low pass filter to 3 kHz.
5. Adjust FM_DEV_TRACK in the IFIC for a deviation of 2.9 ± 0.1 kHz.
Send Set Current Adjustment Value with data: FM_DEV_TRACK (0 to 63)
6. Send Exit Adjustment Save command.

1.10. Adjust SAT Deviation

This adjustment sets the deviation of transmitted SAT. **The Compressor Reference Level and Standard Deviation must be adjusted prior to this adjustment.**

1. Connect a modulation analyzer to the RF port of the I/O connector.
2. Send Adjust SAT Deviation command.
3. Measure the FM deviation of the signal at the RF port of the I/O connector with a modulation analyzer.
Set the high pass filter to 300 Hz and the low pass filter to 15 kHz.
4. Adjust SAT_GAIN in the DSP for a deviation of 2.0 ± 0.05 kHz.

Send Set Current Adjustment Value with data: SAT_GAIN (0 to 255)

5. Send Exit Active Adjustment Mode command with data: Save (1).

1.11. Adjust Wideband Data Deviation

This adjustment sets the deviation of transmitted WBD and ST. **The Compressor Reference Level and Standard Deviation must be adjusted prior to this adjustment.**

1. Connect a modulation analyzer to the RF port of the I/O connector.
2. Send Adjust WBD Deviation command.
3. Measure the FM deviation of the signal at the RF port of the I/O connector with a modulation analyzer.
Set the high pass filter to 300 Hz and the low pass filter to 15 kHz.
4. Adjust WBD_ADJ in the IFIC for a deviation of 8.0 ± 0.1 kHz.
Send Set Current Adjustment Value with data: WBD_ADJ (0 to 31)
5. Send Exit Adjustment Save command.

1.12. Adjust DTMF Deviation

This adjustment sets the transmitter deviation of a single tone from the DTMF set. **The Compressor Reference Level and Standard Deviation must be adjusted prior to this adjustment.**

1. Connect a modulation analyzer to the RF port of the I/O connector.
2. Send Adjust DTMF Deviation command.
3. Measure the PM deviation of the signal at the RF port of the I/O connector with a modulation analyzer.
Set the high pass filter to 300 Hz and the low pass filter to 3 kHz.
4. Adjust ATT5 in the CODEC for a deviation of 4.5 ± 0.2 rad.
Send Set Current Adjustment Value with data: ATT5 (0 to 31)
5. Send Exit Active Adjustment Mode command with data: Save (1).

1.13. Adjust Discriminator Tuning Voltage

This procedure adjusts the tuning voltage for the discriminator.

1. Apply a -50 dBm, 1004 Hz tone @ 8 kHz FM deviation RF signal on ch 350 to the RF port of the I/O connector.
2. Send Set Discriminator command.
3. Measure the AC voltage of the RX Audio signal (1004 Hz) at the I/O connector with a high impedance voltmeter
($\geq 600 \Omega$)
4. Adjust the discriminator tuning voltage until the AC voltage is at a maximum level.
Send Set Current Adjustment Value with data: VTUNE (0 to 124)
5. Send Exit Active Adjustment Mode command with data: Save (1).

1.14. Adjust Expander Reference Level

This adjustment sets the receiver expander input and output reference levels so that the demodulation output is at the required levels. **The Discriminator Tuning Voltage must be adjusted prior to this adjustment.**

1. Apply a -50 dBm, 1004 Hz tone @ 2.9 kHz FM deviation RF signal on ch 350 to the RF port of the I/O connector.
2. Send Adjust Expander Reference Level command.
3. Measure the AC voltage of the RX Audio signal (1004 Hz) at the I/O connector with a high impedance voltmeter ($\geq 600 \Omega$).
4. Send Compandor Off and then Compandor ON command.
5. Measure the difference in AC voltage between Compandor Off and Compandor On.
6. Adjust Line_AD Digital Gain in the IFIC to achieve a difference of less than 5 mVrms of AC voltage.
If AC voltage (Expander Off) > AC voltage (Expander On) then increase Digital Gain.
If AC voltage (Expander Off) < AC voltage (Expander On) then decrease Digital Gain.
7. Send Set Current Adjustment Value with data: Line_AD Digital Gain (0 to 255)
8. Send Exit Active Adjustment Mode command with data: Save (1).

1.15. Adjust RX Audio Level

This adjustment sets the RX audio output level at the I/O port to the required levels. **The Discriminator Tuning Voltage and the Expander Reference Level must be adjusted prior to this adjustment.**

1. Apply a -50 dBm, 1004 Hz tone @ 2.9 kHz FM deviation RF signal on ch 350 to the RF port of the I/O connector.
2. Send Adjust RX Audio Level command.
3. Measure the AC voltage of the RX Audio signal (1004 Hz) at the I/O connector with a high impedance voltmeter ($\geq 10 K\Omega$). If using a 600Ω voltmeter, multiply the measured voltage by 1.17.
4. Adjust RX_GAIN in the DSP for an AC voltage of -25 ± 0.5 dBV (56 ± 3 mVrms).
5. Send Set Current Adjustment Value with data: RX_GAIN (0 to 255)
6. Send Exit Active Adjustment Mode command with data: Save (1).

1.16. RSSI Calibration

This procedure calibrates RSSI to standard RF levels in the cellular and PCS bands. All applied RF levels listed in this calibration do not include correction for path loss in the I/O RF port.

1. Apply a $\pi/4$ shifted DQPSK signal, data = PN9, into the RF port of the I/O connector for each of the following RF levels.

Cellular Band Channel 350 RF Level = -50 dBm	PCS Band Channel 1000 RF Level = -50 dBm
--	--

Cellular Band Channel 350 RF Level = -90 dBm	PCS Band Channel 1000 RF Level = -90 dBm
--	--

2. Send Adjust RSSI command.
3. Send Exit Active Adjustment Mode command with data: Save (1).
4. Repeat above steps for all RF levels and channels listed in the table.

1.17. Battery Reference Voltage Calibration

This procedure calibrates the battery voltage monitoring circuits for LVA and auto shutdown.

1. Apply 4.0 VDC \pm 10 mV to the battery terminals. The power supply must have a low source impedance (< 200 Ω).
2. Send Adjust Battery Reference command.
3. Send Exit Active Adjustment Mode command with data: Save (1).

1.18. Exit Adjust Mode

Use this command to leave adjust mode and save EV adjustments to flash memory.

1. Send Exit Adjustment Mode command with data: Save (1).

1.19. EV Specification (AMPS / TDMA)

EV Adjustment Commands	Adjustment Limits			EV Adjustment Limits			Typical Channel	Measuring Equipment Setup		
	MIN	MAX	Unit	MIN	MAX	Default		Modulation	Hi pass	Lo pass
Battery Reference				180	208	194				
AFC Control										
Center Value	14399999	14400001	Hz	134	166	150				
Scale Factor	16	64	Hz	16	64	46				

1.20. EV Specification (AMPS)

EV Adjustment Commands	Adjustment Limits			EV Adjustment Limits			Typical Channel	Measuring Equipment Setup		
	MIN	MAX	Unit	MIN	MAX	Default		Modulation	Hi pass	Lo pass
PL2 Low-CH	26.3	27.3	dBm	170	212	184	Ch 991			
PL3 Low-CH	23.3	24.3	dBm	155	180	167	Ch 991			
PL2 Mid Low-CH	26.3	27.3	dBm	170	212	186	Ch 175			
PL3 Mid Low-CH	23.3	24.3	dBm	150	175	163	Ch 175			
PL2 Mid High-CH	26.0	27.0	dBm	170	200	180	Ch 592			
PL3 Mid High-CH	23.3	24.3	dBm	150	175	162	Ch 592			
PL2 High-CH	26.0	27.0	dBm	180	212	202	Ch 799			
PL3 High-CH	23.3	24.3	dBm	155	180	167	Ch 799			
PL2 Center-CH	26.3	27.3	dBm	165	195	179	Ch 383			
PL3 Center-CH	23.3	24.3	dBm	150	175	162	Ch 383			
PL4 Center-CH	19.3	20.3	dBm	140	165	154	Ch 383			
PL5 Center-CH	15.3	16.3	dBm	130	160	146	Ch 383			
PL6 Center-CH	11.3	12.3	dBm	120	150	136	Ch 383			
PL7 Center-CH	7.3	8.3	dBm	115	140	128	Ch 383			

Compressor Ref		0.1	kHz	5	9	7	Ch 350		300	3000
Standard Deviation	2.8	3.0	kHz	32	52	42	Ch 350		300	3000
SAT Deviation	1.95	2.05	kHz	170	190	181	Ch 350		300	1500
WBD Deviation	7.9	8.1	kHz	8	18	12	Ch 350		300	1500
DTMF Deviation	4.05	4.42	kHz	5	9	7	Ch 350		300	3000
Discriminator	Peak		mV	50	100	74	Ch 350	8.0 kHz		
Expander Ref		5.0	mV	70	110	92	Ch 350	2.9 kHz		
RX Audio	-25.5	-24.5	dBV	150	200	173	Ch 350	2.9 kHz		

1.21. EV Specification (TDMA 800 MHz)

EV Adjustment Commands	Adjustment Limits			EV Adjustment Limits			Typical Channel	Measuring Equipment Setup		
	MIN	MAX	Unit	MIN	MAX	Default		Modulation	Hi pass	Lo pass
PL2 Low-CH	26.7	27.3	dBm	170	210	191	Ch 991			
PL3 Low-CH	23.3	24.3	dBm	165	195	179	Ch 991			
PL2 Mid Low-CH	26.7	27.3	dBm	170	200	185	Ch 175			
PL3 Mid Low-CH	23.3	24.3	dBm	160	190	174	Ch 175			
PL2 Mid High-CH	26.4	27.0	dBm	170	200	185	Ch 592			
PL3 Mid High-CH	23.3	24.3	dBm	160	190	174	Ch 592			
PL2 High-CH	26.4	27.0	dBm	170	210	191	Ch 799			
PL3 High-CH	23.3	24.3	dBm	165	195	179	Ch 799			
PL2 Center-CH	26.7	27.3	dBm	170	200	186	Ch 383			
PL3 Center-CH	23.3	24.3	dBm	160	190	175	Ch 383			
PL4 Center-CH	19.3	20.3	dBm	150	170	165	Ch 383			
PL5 Center-CH	15.3	16.3	dBm	145	170	157	Ch 383			
PL6 Center-CH	11.3	12.3	dBm	135	160	147	Ch 383			
PL7 Center-CH	7.3	8.3	dBm	125	155	140	Ch 383			
PL8 Center-CH	1.8	3.8	dBm	115	145	130	Ch 383			
PL9 Center-CH	-3.2	-1.2	dBm	110	135	123	Ch 383			
PL10 Center-CH	-8.2	-6.2	dBm	100	125	113	Ch 383			
RF TX DC Offset		-26	dB			0000	Ch 350			
RF RX DC Offset	-3	3				0000	Ch 350	$\pi/4$ DQPSK Continuous PN9 D		
RSSI (-50 dBm)				170	230	200	Ch 350	$\pi/4$ DQPSK Continuous PN9 D		
RSSI (-90 dBm)				100	150	125	Ch 350	$\pi/4$ DQPSK Continuous PN9 D		

1.22. EV Specification (TDMA 1900 MHz)

EV Adjustment Commands	Adjustment Limits			EV Adjustment Limits			Typical Channel	Measuring Equipment Setup		
	MIN	MAX	Unit	MIN	MAX	Default		Modulation	Hi pass	Lo pass
PL2 Low-CH	26.7	27.3	dBm	165	200	183	Ch 2			
PL3 Low-CH	23.3	24.3	dBm	155	185	172	Ch 2			
PL2 Mid Low-CH	26.7	27.3	dBm	170	200	187	Ch 500			
PL3 Mid Low-CH	23.3	24.3	dBm	160	190	176	Ch 500			
PL2 Mid High-CH	26.7	27.3	dBm	170	200	188	Ch 1500			
PL3 Mid High-CH	23.3	24.3	dBm	160	190	176	Ch 1500			
PL2 High-CH	26.7	27.3	dBm	175	205	191	Ch 1998			
PL3 High-CH	23.3	24.3	dBm	160	190	178	Ch 1998			
PL2 Center-CH	26.7	27.3	dBm	170	200	187	Ch 1000			

PL3 Center-CH	23.3	24.3	dBm	160	190	175	Ch 1000			
PL4 Center-CH	19.3	20.3	dBm	150	180	166	Ch 1000			
PL5 Center-CH	15.3	16.3	dBm	140	170	157	Ch 1000			
PL6 Center-CH	11.3	12.3	dBm	135	160	149	Ch 1000			
PL7 Center-CH	7.3	8.3	dBm	125	155	142	Ch 1000			
PL8 Center-CH	0.8	2.8	dBm	115	145	131	Ch 1000			
PL9 Center-CH	-4.2	-2.2	dBm	110	135	124	Ch 1000			
PL10 Center-CH	-9.2	-7.2	dBm	95	130	114	Ch 1000			
RSSI (-50 dBm)				160	220	190	Ch 1000	$\pi/4$ DQPSK Continuous PN9 D _c		
RSSI (-90 dBm)				90	140	116	Ch 1000	$\pi/4$ DQPSK Continuous PN9 D _c		

Parts List

Reff.	Comp. number	value
C101	GRM36CH040C50-641/PT281	4P
C102	GRM36B102K50-641/PT281	.001u
C103	GRM36B102K50-641/PT281	.001u
C104	GRM36B102K50-641/PT281	.001u
C105	GRM36B102K50-641/PT281	.001u
C106	GRM36B102K50-641/PT281	.001u
C107	GRM36B102K50-641/PT281	.001u
C108	GRM36CH120J50-641/PT281	12P
C109	GRM36CH100D50-641/PT281	10pF
C110	GRM36CK010B50-641/PT281	1P
C111	GRM36CH040C50-641/PT281	4P
C112	GRM36CH050C50-641/PT281	5P
C113	GRM36CK020B50-641/PT281	2P
C114	GRM36CJ030C50-641/PT281	3P
C115	GRM39B104K16U530/PT264	0.1u
C116	GRM36B102K50-641/PT281	.001u
C117	GRM36CH080D50-641/PT281	8P
C118	GRM36CH	0P
C119	GRM39B104K16U530/PT264	0.1u
C120	GRM36B102K50-641/PT281	.001u
C121	GRM36B102K50-641/PT281	.001u
C122	GRM36B104K6.3D641/PT281	0.1u
C123	GRM36B104K6.3D641/PT281	0.1u
C124	GRM36B104K6.3D641/PT281	0.1u
C125	GRM36B104K6.3D641/PT281	0.1u
C126	GRM36B104K6.3D641/PT281	0.1u
C127	GRM36B104K6.3D641/PT281	0.1u
C128	GRM36B104K6.3D641/PT281	0.1u
C129	GRM36CH100D50-641/PT281	10P
C130	GRM36B104K6.3D641/PT281	0.1u
C131	GRM36B104K6.3D641/PT281	0.1u
C132	GRM36B104K6.3D641/PT281	0.1u

C133	GRM36B104K6.3D641/PT281	0.1u
C134	GRM36B223K16-T	.022u
C135	GRM36CH221J25S641/PT281	220pF
C136	GRM36CH680J50S641/PT281	68pF
C137	GRM36B332K50-641/PT281	.0033u
C138	GRM36B102K50-641/PT281	.001u
C139	GRM36CH470J50-641/PT281	47P
C140	GRM36B104K6.3D641/PT281	0.1u
C141	GRM36B102K50-641/PT281	.001u
C143	GRM36CH470J50-641/PT281	47P
C144	GRM36CH470J50-641/PT281	47P
C145	GRM36CH470J50-641/PT281	47P
C146	GRM36CH470J50-641/PT281	47P
C147	GRM36CH470J50-641/PT281	47P
C148	GRM36CH470J50-641/PT281	47P
C149	GRM36CH470J50-641/PT281	47P
C150	GRM36CH470J50-641/PT281	47P
C151	GRM36CH470J50-641/PT281	47P
C152	GRM36B102K50-641/PT281	.001u
C153	GRM36B102K50-641/PT281	.001u
C154	GRM36CH470J50-641/PT281	47P
C155	GRM36B102K50-641/PT281	.001u
C156	GRM36CK020B50-641/PT281	2P
C157	GRM40F105Z16U533/PT288	1.0u
C158	GRM36CH360J50-641/PT281	36P
C159	GRM36B103K16-641/PT281	0.01u
C160	GRM36B102K50-641/PT281	.001u
C161	GRM36B102K50-641/PT281	.001u
C162	GRM36B103K16-641/PT281	0.01u
C163	GRM36CK020B50-641/PT281	2pF
C164	GRM36CK010B50-641/PT263	1pF
C165	GRM36B103K16-641/PT281	0.01u
C166	GRM36B103K16-641/PT281	0.01u
C168	GRM36B332K50-641/PT281	.0033u
C169	GRM36B332K50-641/PT281	.0033u
C170	GRM36B332K50-641/PT281	.0033u
C171	GRM36B332K50-641/PT281	.0033u
C172	GRM36B332K50-641/PT281	.0033u
C173	GRM36CH390J50-641/PT281	39P
C174	GRM36CH040C50-641/PT281	4P
C176	GRM36CH	0P
C200	GRM36CH060D50-641/PT281	6P
C201	GRM36B103K16-641/PT281	0.01u
C202	GRM36CH101J50S641/PT281	100P
C203	GRM36CH	0P
C204	GRM36B102K50-641/PT281	.001u

C205	GRM36B102K50-641/PT281	.001u
C206	GRM36B102K50-641/PT281	.001u
C207	GRM36CH101J50S641/PT281	100P
C208	GRM36CH040C50-641/PT281	4P
C209	GRM36B102K50-641/PT281	.001u
C210	GRM36B102K50-641/PT281	1000P
C211	GRM36B102K50-641/PT281	1000P
C212	GRM36B102K50-641/PT281	1000P
C213	GRM36CH080D50-641/PT281	8P
C214	GRM36B102K50-641/PT281	.001u
C215	GRM36B102K50-641/PT281	.001u
C216	GRM36B103K16-641/PT281	0.01u
C217	GRM36CH101J50S641/PT281	100P
C218	GRM36B102K50-641/PT281	.001u
C219	GRM36B102K50-641/PT281	.001u
C220	GRM36B102K50-641/PT281	.001u
C221	GRM36B102K50-641/PT281	.001u
C222	GRM36B102K50-641/PT281	.001u
C223	GRM36CK020B50-641/PT281	2P
C224	GRM36CH470J50-641/PT281	47P
C225	GRM36CH150J50-641/PT281	15P
C226	GRM36B152K50-641/PT281	1500P
C227	GRM36CH100D50-641/PT281	10pF
C228	GRM36B152K50-641/PT281	1500P
C229	GRM39F105Z10U530/PT266	1u
C230	GRM36B152K50-641/PT281	1500P
C231	GRM36B152K50-641/PT281	1500P
C232	GRM39F105Z10U530/PT266	1u
C233	GRM36B102K50-641/PT281	.001u
C234	GRM36CH470J50-641/PT281	47P
C235	GRM36CH100D50-641/PT281	10pF
C236	GRM36CH100D50-641/PT281	10pF
C237	GRM36CH100D50-641/PT281	10pF
C238	GRM36CH100D50-641/PT281	10pF
C241	GRM36CH470J50-641/PT281	47P
C242	GRM36CH150J50-641/PT281	15P
C244	GRM39F105Z10U530/PT266	1u
C245	GRM36CH100D50-641/PT281	10pF
C246	GRM36B102K50-641/PT281	.001u
C253	GRM36CH470J50-641/PT281	47P
C254	GRM36CH100D50-641/PT281	10pF
C256	GRM36CH101J50S641/PT281	100P
C257	GRM36B102K50-641/PT281	.001u
C259	GRM36B102K50-641/PT281	.001u
C260	GRM36B103K16-641/PT281	0.01u
C262	GRM36B103K16-641/PT281	0.01u

C263	GRM36CH680J50S641/PT281	68P
C266	GRM36CH050C50-641/PT281	5P
C267	GRM36B103K16-641/PT281	0.01u
C268	GRM39B104K16U530/PT264	0.1u
C269	GRM36B103K16-641/PT281	0.01u
C270	GRM36B104K6.3D641/PT281	0.1u
C271	GRM36B104K6.3D641/PT281	0.1u
C272	GRM36CK020B50-641/PT281	2P
C274	GRM36CH680J50S641/PT281	68P
C275	GRM36CH330J50-641/PT281	33P
C278	GRM36CH050C50-641/PT281	5P
C279	GRM36B103K16-641/PT281	0.01u
C280	GRM39F105Z10U530/PT266	1u
C281	GRM36CH680J50S641/PT281	68P
C282	GRM36CH090D50-641/PT281	9P
C283	GRM36CH040C50-641/PT281	4P
C284	GRM36CH330J50-641/PT281	33P
C286	GRM39B104K16U530/PT264	0.1u
C287	GRM39B104K16U530/PT264	0.1u
C288	GRM36B103K16-641/PT281	0.01u
C289	GRM36B104K6.3D641/PT281	0.1u
C290	GRM36B104K6.3D641/PT281	0.1u
C291	GRM36B103K16-641/PT281	0.01u
C292	GRM39F105Z10U530/PT266	1u
C293	GRM36B103K16-641/PT281	0.01u
C294	GRM36B103K16-641/PT281	0.01u
C295	GRM36B103K16-641/PT281	0.01u
C298	GRM36CH100D50-641/PT281	10pF
C299	GRM36CH100D50-641/PT281	10pF
C300	GRM36CH100D50-641/PT281	10P
C301	GRM36B103K16-641/PT281	0.01u
C302	GRM36CH100D50-641/PT281	10P
C303	GRM36CH100D50-641/PT281	10P
C304	GRM36CH100D50-641/PT281	10P
C305	GRM36CH100D50-641/PT281	10P
C306	GRM36CH100D50-641/PT281	10P
C307	GRM36CH100D50-641/PT281	10P
C308	GRM36B104K6.3D641/PT281	0.1u
C309	GRM36B104K6.3D641/PT281	0.1u
C310	GRM36CH101J50S641/PT281	100P
C311	ECHU1C103JB5	.01u
C312	GRM36B182K50-641/PT281	1.8n
C313	GRM36CH	0P
C314	GRM40CH182J50S500/PT288	1.8n
C315	GRM36CH470J50-641/PT281	47P
C317	GRM36CK010B50-641/PT281	1P

C318	GRM36CH	0P
C319	GRM36B123K16-641/PT281	12nF
C320	GRM36CH101J50S641/PT281	100P
C321	GRM36B102K50-641/PT281	.001u
C322	GRM36CH101J50S641/PT281	100P
C323	GRM39B562K50C500/PT264	5.6nF
C324	GRM36B471K50-641/PT281	470P
C325	GRM36B331K50-641/PT281	330P
C326	GRM36CH060D50-641/PT281	6P
C327	GRM36CH220J50-641/PT281	22P
C328	GRM36CH101J50S641/PT281	100P
C329	GRM36B102K50-641/PT281	.001u
C330	GRM36CH560J50S641/PT263	56P
C331	GRM36CH270J50-641/PT281	27pF
C332	GRM36CJ030C50-641/PT281	3P
C333	GRM36B102K50-641/PT281	.001u
C334	GRM36CK010B50-641/PT281	1P
C335	GRM36B102K50-641/PT281	.001u
C336	GRM36CH	0P
C337	GRM36B104K6.3D641/PT281	0.1u
C338	GRM36CH101J50S641/PT281	100P
C339	GRM36B102K50-641/PT281	.001u
C340	GRM36B102K50-641/PT281	.001u
C341	GRM36CH	0P
C342	GRM36CH101J50S641/PT281	100P
C343	GRM36CH101J50S641/PT281	100P
C344	GRM36CH360J50-641/PT281	36pF
C345	GRM36CH150J50-641/PT281	15pF
C346	GRM36B102K50-641/PT281	.001u
C347	GRM36CH	0P
C348	GRM36CK020B50-641/PT281	2P
C349	GRM36CH100D50-641/PT281	10p
C350	GRM36CH101J50S641/PT281	100p
C351	GRM36B103K16-641/PT281	0.01u
C352	GRM36CH101J50S641/PT281	100P
C353	GRM39CH221J50-500/PT266	220P
C354	GRM36B102K50-641/PT281	.001u
C355	ECST1AZ105R	1u
C356	ECST0JZ225R	2.2u
C357	GRM36B103K16-641/PT281	0.01u
C358	GRM36B104K6.3D641/PT281	0.1u
C359	GRM36CJ030C50-641/PT281	3P
C360	GRM36B102K50-641/PT281	.001u
C361	GRM36CH100D50-641/PT281	10P
C362	GRM36CH100D50-641/PT281	10P
C363	GRM36B102K50-641/PT281	.001u

C364	GRM36B102K50-641/PT281	.001u
C367	GRM36B102K50-641/PT281	.001u
C368	GRM36CH101J50S641/PT281	100p
C369	GRM36CH100D50-641/PT281	10P
C373	GRM36B103K16-641/PT281	0.01u
C374	GRM36CH101J50S641/PT281	100pF
C375	GRM36CH	0P
C401	GRM36B102K50-641/PT281	1000P
C403	GRM36B103K16-641/PT281	0.01u
C404	ECST0JZ685R	6.8u
C405	ECST0JZ685R	6.8u
C406	GRM39F105Z10U530/PT266	1u
C407	GRM39F105Z10U530/PT266	1u
C408	GRM36B103K16-641/PT281	0.01u
C409	GRM36F104Z6.3-649/PT281	0.1u
C410	ECST0JZ685R	6.8u
C411	ECST0JZ685R	6.8u
C412	ECST0JZ685R	6.8u
C413	GRM39F105Z10U530/PT266	1u
C414	GRM39F105Z10U530/PT266	1u
C415	GRM36B471K50-641/PT281	470P
C416	GRM36B471K50-641/PT281	470P
C417	GRM39F105Z10U530/PT266	1u
C418	GRM39F105Z10U530/PT266	1u
C419	GRM36CH220J50-641/PT281	22P
C420	GRM36CH220J50-641/PT281	22P
C421	GRM36B473K10D641/PT281	0.047u
C422	GRM36CH220J50-641/PT281	22P
C423	ECST0JZ685R	6.8u
C424	GRM39B104K16U530/PT264	0.1u
C425	GRM36B471K50-641/PT281	470P
C426	GRM39B104K16U530/PT264	0.1u
C427	GRM36CH220J50-641/PT281	22P
C428	GRM36CH220J50-641/PT281	22P
C429	ECST0JZ685R	6.8u
C430	GRM36B104K6.3D641/PT281	0.1u
C431	GRM40F225Z10U530/PT288	2.2u
C432	GRM36B471K50-641/PT281	470P
C433	ECST0JZ685R	6.8u
C434	GRM36CH220J50-641/PT281	22P
C435	GRM36CH100D50-641/PT281	10P
C436	GRM36CH100D50-641/PT281	10P
C437	GRM36CH100D50-641/PT281	10P
C438	GRM36CH100D50-641/PT281	10P
C439	GRM36CH100D50-641/PT281	10P
C440	GRM36CH100D50-641/PT281	10P

C441	GRM36CH100D50-641/PT281	10P
C443	GRM36CH100D50-641/PT281	10P
C500	ECST0JZ475R	4.7u
C501	GRM36B682K25-641/PT281	0.0068u
C502	ECST0JZ475R	4.7u
C503	GRM39B224K10U530/PT264	.22u
C504	GRM36CH220J50-641/PT281	22P
C505	GRM36CH220J50-641/PT281	22P
C506	GRM39B104K16U530/PT264	0.1u
C507	GRM36CH221J25S641/PT281	220P
C508	EEJK0GS226R	22u
C509	GRM40F225Z10U530/PT288	2.2u
C510	GRM36B103K16-641/PT281	0.01u
C511	GRM36B331K50-641/PT281	330P
C512	GRM39F105Z10U530/PT266	1u
C513	GRM39F105Z10U530/PT266	1u
C514	GRM36B103K16-641/PT281	.01u
C515	GRM36CH330J50-641/PT281	33P
C516	GRM39F105Z10U530/PT266	1u
C517	GRM39F105Z10U530/PT266	1u
C518	GRM40F225Z10U530/PT288	2.2u
C519	GRM36B103K16-641/PT281	0.01u
C520	GRM36F104Z6.3-649/PT281	0.1u
C521	GRM36CH	0P
C522	GRM36CH470J50-641/PT281	47P
C523	GRM36B104K6.3D641/PT281	.1u
C524	GRM36CH101J50S641/PT281	100P
C525	EEJK0GS226R	22uF
C526	GRM36CH220J50-641/PT281	22pF
C527	GRM36CH220J50-641/PT281	22pF
C528	GRM36B104K6.3D641/PT281	.1u
C529	GRM36CH220J50-641/PT281	22P
C530	GRM36CH220J50-641/PT281	22P
C531	GRM36CH220J50-641/PT281	22P
C532	GRM36CH	0P
C533	GRM36B104K6.3D641/PT281	.1u
C534	GRM36CH220J50-641/PT281	22pF
C535	GRM36CH220J50-641/PT281	22pF
C600	GRM36CH150J50-641/PT281	15P
C601	GRM36CH150J50-641/PT281	15P
C602	GRM36CH220J50-641/PT281	22P
C603	GRM36B103K16-641/PT281	.01u
C604	GRM36B103K16-641/PT281	.01u
C605	GRM36B103K16-641/PT281	.01u
C606	GRM36B103K16-641/PT281	.01u
C608	GRM36F104Z6.3-649/PT281	.1u

C609	GRM36B103K16-641/PT281	.01u
C612	GRM36B103K16-641/PT281	.01u
C613	GRM36B103K16-641/PT281	.01u
C700	GRM36F104Z6.3-649/PT281	0.1u
C701	GRM36F104Z6.3-649/PT281	0.1u
C702	GRM36F104Z6.3-649/PT281	0.1u
C704	GRM36F104Z6.3-649/PT281	0.1u
C705	GRM36F104Z6.3-649/PT281	0.1u
C706	GRM36F104Z6.3-649/PT281	0.1u
C707	GRM36F104Z6.3-649/PT281	0.1u
C708	GRM36B103K16-641/PT281	.01u
C709	GRM36F104Z6.3-649/PT281	0.1u
L101	LQW1608A6N8C00	6.8nH
L102	HK10056N8J-T	6.8nH
L103	HK10052N2S-T	2.2nH
L104	HK 1608 8N2J-T	6.8nH
L105	HK100510NJ-T	10 nH
L106	HK1608R18J-T	180nH
L107	HK1608R18J-T	180nH
L108	HK10051N0S-T	1.0nH
L109	LQN1HR29J04	290nH
L110	HK10052N7S-T	2.7nH
L111	ELJNDR15JF	150nH
L112	LQH3N391J04M00-01/Q052	390uH
L113	LQW1608A3N9C00	3.9nH
L116	HK100510NJ-T	10nH
L117	HK100510NJ-T	10nH
L118	HK10051N5S-T	1.5nH
L200	HK 1608 8N2J-T	8.2nH
L201	HK1608 22NJ-T	22nH
L203	ELJNDR82JF	820nH
L204	HK2125 R27J-T	270nH
L205	HK100512NJ-T	12nH
L206	HK160810NJ-T	10nH
L207	HK10055N6S-T	5.6nH
L211	HK160868NJ-T	68nH
L212	HK160868NJ-T	68nH
L213	LQN21A3N3D04	3.3nH
L215	LQN21A10NJ04M00-01	10nH
L216	HK10054N7S-T	4.7nH
L301	LQW1608A68NG00	68nH
L302	LK 1608 R33K-T	0.33uH
L303	LQW1608A22NG00	22nH
L304	LQW1608A10NG00	10nH
L305	LK 1608 R33K-T	330nH
L306	HK10053N3S-T	3.3nH

L307	HK100512NJ-T	12nH
L308	HK100510NJ-T	10 nH
FL100	LFDP20N0022A	
FL101	FAR-D5CC-881M50-D1A4-T	
FL102	TDFM1B-1960L-11	
FL103	TDFM1B-1960L-11	
FL104	SAFC881.5MD91T-TC12	
FL105	EFCH112MMQT1	
FL106	MLF-MR28P-450	
FL201	SAFC836.5MC90T-TC11(TX)	
FL202	DFC31R88P060LHB	
D101	KV1471ETR@2-3	
D102	KV1471ETR@2-3	
D201	1SS381-TPH3	
D202	IMN10T108	
D203	DA121TL	
D204	DA121TL	
D300	HVC357-3TRF	
D301	HVC357-3TRF	
D302	1SS381-TPH3	
D303	1SV245(TPH3)	
D400	LM4041DIM3-1.2	
D401	DA121TL	
D403	MA729-TX-IR2	
D404	DA221TL	
D405	MBRM120LT3	
D406	DA121TL	
D407	DA121TL	
D408	UDZ6.8B	
D409	UDZ6.8B	
D600	LNJ312G8JRA	
D601	LNJ312G8JRA	
D602	LNJ312G8JRA	
D603	LNJ312G8JRA	
D604	LNJ312G8JRA	
D605	LNJ312G8JRA	
D606	LNJ312G8JRA	
D607	LNJ312G8JRA	
D608	LNJ312G8JRA	
D609	LNJ312G8JRA	
D610	LNJ312G8JRA	
D611	LNJ312G8JRA	
D614	MAZL068D	
D615	MAZL068D	
D616	MAZL068D	
D617	MA4Z082WA	

D618	MA111TX	
Q101	FDC6304P	
Q200	UMA2NTR	
Q201	DTC114EETL	10k
Q202	DTC114EETL	10k
Q204	SI3443DV-T1	
Q205	SI3443DV-T1	
Q301	MRF2947RAT1	
Q301	MRF2947RAT1	
Q302	MRF2947RAT1	
Q302	MRF2947RAT1	
Q304	MMBF2201NT1	
Q306	UMA2NTR	
Q307	UMA2NTR	
Q308	UMA2NTR	
Q311	DTC114EETL	10k
Q401	DTC114EETL	10k
Q403	UMW1NTR	
Q404	SI3443DV-T1	
Q405	IMX9	
Q406	SI3443DV-T1	
Q407	SI3443DV-T1	
Q408	SI3443DV-T1	
Q409	DTC114EETL	10k
Q410	2SA1774TLR	
Q411	FDC6304P	
Q412	FDC6304P	
Q500	2SC4617TLRS	
R101	ERJ2GEJ104X	100k
R102	ERJ2GEJ104X	100k
R103	ERJ2GEJ102X	1K
R104	ERJ2GEJ100X	10
R105	ERJ2GEJ100X	10
R106	ERJ2GEJ100X	10
R107	ERJ2GEJ100X	10
R108	ERJ2GEJ100X	10
R109	ERJ2GEJ100X	10
R110	ERJ2GEJ104X	100k
R111	ERJ2GEJ153X	15k
R112	ERJ2GEJ103X	10k
R114	ERJ2GEJ272X	2.7k
R115	ERJ2GEJ821X	820
R116	ERJ2GEJ272X	2.7k
R117	ERJ2GEJ222X	2.2k
R118	ERJ2GEJ103X	10K
R119	ERJ2GEJ104X	100K

R120	ERJ2GEJ102X	1K
R122	ERJ2GEJ153X	15k
R123	ERJ2GEJ153X	15k
R124	ERJ2GEJ104X	100k
R125	ERJ2GEJ104X	100k
R127	ERJ2GEJ104X	100k
R129	ERJ2GEJ152X	1.5k
R130	ERJ2GEJ152X	1.5k
R131	ERJ2GEJ102X	1K
R132	ERJ2GEJ102X	1K
R133	ERJ2GEJ104X	100k
R134	ERJ2GE0R00XH	0
R137	ERJ2GEJ102X	1K
R138	ERJ2GEJ153X	15k
R139	ERJ2GEJ102X	1K
R140	ERJ2GEJ102X	1K
R142	ERJ2GEJ102X	1K
R143	ERJ2GEJ222X	2.2k
R200	ERJ2GEJ103X	10k
R201	ERJ2GEJ820X	82
R202	ERJ2GEJ121X	120
R203	ERJ2GEJ820X	82
R204	ERJ2GEJ332X	3.3k
R205	ERJ2GEJ182X	1.8k
R206	ERJ2GEJ103X	10k
R207	ERJ2GEJ182X	1.8k
R209	ERJ2GEJ150X	15
R210	ERJ2GEJ181X	180
R211	ERJ2GEJ330X	33
R212	ERJ2GEJ181X	180
R214	ERJ2GEJ330X	33
R215	ERJ2GEJ181X	180
R216	ERJ2GEJ103X	10k
R228	ERJ2GEJ181X	180
R229	ERJ2GEJ102X	1k
R230	ERJ2GEJ102X	1k
R231	ERJ2GEJ102X	1k
R232	ERJ2GEJ102X	1k
R239	ERJ2GEJ273X	27k
R243	ERJ2GEJ153X	15k
R245	ERJ2GEJ104X	100K
R256	ERJ2GEJ332X	3.3k
R257	ERJ2GEJ562X	5.6K
R258	ERJ2GEJ103X	10k
R259	ERJ2GEJ181X	180
R260	ERJ2GEJ181X	180

R261	ERJ2GEJ330X	33
R262	ERJ2GEJ103X	10k
R301	ERJ2GEJ101X	100
R302	ERJ2GEJ150X	15
R303	ERJ2GEJ101X	100
R304	ERJ2GEJ150X	15
R305	ERJ2GEJ101X	100
R306	ERJ2GEJ101X	100
R307	ERJ2GEJ101X	100
R308	ERJ2GEJ822X	8.2k
R311	ERJ2GEJ471X	470
R312	ERJ2GEJ562X	5.6K
R313	ERJ2GEJ472X	4.7k
R314	ERJ2GEJ332X	3.3k
R315	ERJ2GEJ104X	100k
R316	ERJ2GEJ822X	8.2k
R317	ERJ2GEJ103X	10k
R318	ERJ2GEJ472X	4.7k
R319	ERJ2GEJ274X	270k
R320	ERJ2GEJ222X	2.2k
R321	ERJ2GEJ274X	270K
R322	ERJ2GEJ222X	2.2k
R323	ERJ2GEJ150X	15
R324	ERJ2GEJ101X	100
R325	ERJ2GEJ101X	100
R326	ERJ2GEJ223X	22K
R327	ERJ2GEJ154X	150K
R328	ERJ2GEJ101X	100
R329	ERJ2GEJ222X	2.2k
R330	ERJ2GEJ560X	56
R331	ERJ2GEJ222X	2.2K
R332	ERJ2GEJ681X	680
R333	ERJ2GEJ472X	4.7k
R334	ERJ2GEJ101X	100
R335	ERJ2GEJ101X	100
R336	ERJ2GEJ680X	68
R337	ERJ2GEJ101X	100
R338	ERJ2GEJ154X	150K
R339	ERJ2GEJ153X	15k
R344	ERJ2GEJ271X	270
R345	ERJ2GEJ180X	18
R346	ERJ2GEJ271X	270
R363	ERJ2GEJ473X	47k
R364	ERJ2GEJ391X	390
R365	ERJ2GEJ823X	82k
R367	ERJ2GEJ103X	10k

R368	ERJ2GEJ333X	33K
R369	ERJ2GEJ102X	1K
R371	ERJ2GEJ104X	100k
R372	ERJ2GEJ103X	10k
R373	ERJ2GEJ104X	100k
R374	ERJ2GEJ102X	1K
R400	ERJ2GEJ104X	100K
R401	ERJ2GEJ223X	22k
R403	ERJ3EKF5102V	51K
R404	ERJ3EKF2702V	27K
R405	ERJ2GEJ104X	100K
R406	ERJ2GEJ104X	100K
R407	ERJ2GEJ474X	470k
R408	ERJ3EKF3902V	39K
R409	ERJ3EKF1802V	18K
R410	ERJ2GEJ103X	10k
R411	ERJ2GEJ823X	82k
R412	ERJ3EKF5102V	51K
R413	ERJ2GEJ103X	10k
R414	ERJ2GEJ273X	27K
R415	ERJ2GEJ104X	100K
R418	ERJ2GEJ104X	100K
R419	ERJ2GEJ104X	100k
R420	ERJ2GEJ102X	1K
R421	ERJ2GEJ224X	220K
R422	ERJ2GEJ330X	33
R423	ERJ2GEJ104X	100K
R424	ERJ2GEJ104X	100k
R426	ERJ2GEJ472X	4.7k
R427	ERJ2GEJ472X	4.7k
R428	ERJ2GEJ104X	100k
R429	ERJ2GEJ104X	100k
R430	ERJ2GEJ104X	100K
R431	ERJ2GEJ104X	100k
R432	ERJ2GEJ104X	100k
R433	ERJ2GEJ104X	100k
R434	ERJ2GEJ104X	100k
R435	ERJ2GEJ104X	100k
R436	ERJ2GEJ104X	100k
R437	ERJ2GEJ102X	1K
R438	ERJ2GEJ102X	1K
R502	ERJ2GEJ223X	22K
R503	ERJ2GEJ472X	4.7k
R504	ERJ2GEJ103X	10k
R505	ERJ2GEJ563X	56K
R507	ERJ2GEJ222X	2.2K

R508	ERJ2GEJ393X	39K
R509	ERJ2GEJ104X	100k
R512	ERJ2GEJ103X	10k
R513	ERJ2GEJ222X	2.2k
R514	ERJ2GEJ104X	100k
R515	ERJ2GEJ104X	100k
R516	ERJ2GEJ104X	100k
R517	ERJ2GEJ103X	10k
R518	ERJ2GEJ104X	100k
R519	ERJ2GEJ104X	100k
R520	ERJ2GEJ102X	1K
R521	ERJ2GEJ104X	100k
R522	ERJ2GEJ332X	3.3k
R523	ERJ2GEJ104X	100K
R524	ERJ2GEJ104X	100k
R525	ERJ2GEJ104X	100k
R526	ERJ2GEJ104X	100k
R600	ERJ2GEJ104X	100k
R601	ERJ3GEYJ200V	20
R602	ERJ3GEYJ200V	20
R603	ERJ3GEYJ101V	100
R604	ERJ3GEYJ101V	100
R606	ERJ2GEJ104X	100k
R607	ERJ2GEJ104X	100k
R608	ERJ2GEJ104X	100k
R609	ERJ2GEJ104X	100k
R610	ERJ2GEJ104X	100k
R611	ERJ2GEJ104X	100k
R612	ERJ3GEYJ101V	100
R613	ERJ3GEYJ101V	100
R614	ERJ2GEJ104X	100k
R615	ERJ2GEJ103X	10k
R616	ERJ2GEJ103X	10k
R618	ERJ2GEJ104X	100k
R619	ERJ2GEJ103X	10k
R621	ERJ2GEJ105X	1M
R622	ERJ2GE0R00XH	0
R623	ERJ2GE0R00XH	0
R624	ERJ2GEJ104X	100K
R627	ERJ2GEJ103X	10K
R628	ERJ2GEJ103X	10K
R629	ERJ3EKF1002V	10K
R630	ERJ2GEJ101X	100
R631	ERJ2GEJ101X	100
R632	ERJ2GEJ101X	100
R633	ERJ2GEJ101X	100

R634	ERJ2GEJ101X	100
R635	ERJ2GEJ101X	100
R636	ERJ2GEJ101X	100
R637	ERJ2GEJ104X	100K
R638	ERJ2GEJ101X	100
R640	ERJ2GEJ104X	100k
R642	ERJ2GEJ104X	100k
R643	ERJ2GEJ104X	100k
R644	ERJ2GEJ104X	100K
R645	ERJ2GEJ104X	100k
R648	ERJ2GEJ101X	100
R649	ERJ2GEJ101X	100
R650	ERJ2GEJ101X	100
R651	ERJ2GEJ101X	100
R701	ERJ2GEJ101X	100
R702	ERJ2GEJ101X	100
R703	ERJ2GEJ101X	100
R705	ERJ2GEJ821X	820
R706	ERJ2GEJ101X	100
R707	ERJ2GEJ101X	100
R714	ERJ2GEJ103X	10K
R715	ERJ2GEJ682X	6.8K
R716	ERJ2GEJ104X	100K
S0018	SY76009B	
S0029	SY70044A	
J	JEBO00002B	
J600	JA76004E	
J601	FH12-24S-0.5SV	
A0008	AY76013A	
A0013	AY76007A	
A0021	AY76006A	
DS007	DA76016A	
E1		
E0030	AN76048A	
E501		
E502		
F401	miniSMDC110-2	