



UR6225

CMOS IC

POSITIVE VOLTAGE REGULATOR

DESCRIPTION

The UTC **UR6225** is a positive voltage output, three-pin regulator, that provide a high current even when the input/output voltage differential is small. Low power consumption and high accuracy is achieved through CMOS and laser trimming technologies.

The UTC **UR6225** consists of a high-precision voltage reference, an error amplification circuit, and a current limited output driver. Transient response to load variations have improved in comparison to the existing series.

FEATURES

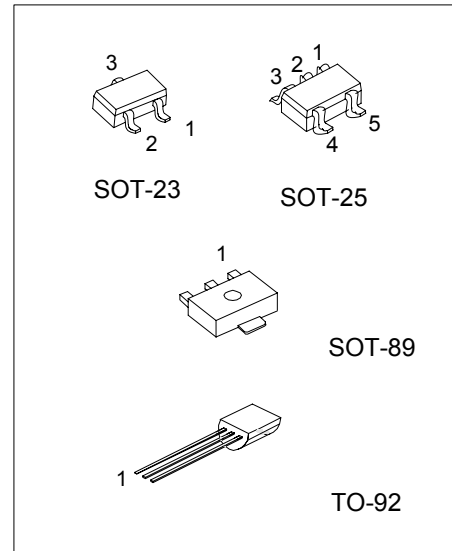
- * Maximum output current: 250mA
(within max. power dissipation, $V_{OUT} = 5.0V$)
- * Output voltage range: 1.2V ~ 6.0V in 0.1V increments
(1.2V ~ 1.9V for custom products)
- * Highly accurate: output voltage $\pm 2\%$
($\pm 1\%$ for semi-custom products)
- * Low power consumption: Typ. $2.0\mu A @ V_{OUT}=5.0V$
- * Output voltage temperature characteristics :
Typ. $\pm 100ppm/$
- * Input stability : Typ. $0.2\%/V$
- * Small input-output differential :
 $I_{OUT} = 100mA @ V_{OUT} = 5.0V$ with a 0.12V differential.
- * Over temperature protection

ORDERING INFORMATION

Order Number		Package	Pin Assignment					Packing
Normal	Lead Free Plating		1	2	3	4	5	
UR6225-xx-AB3-C-R	UR6225L-xx-AB3-C-R	SOT-89	G	I	O	-	-	Tape Reel
UR6225-xx-AE3-3-R	UR6225L-xx-AE3-3-R	SOT-23	O	G	I	-	-	Tape Reel
UR6225-xx-AF5-F-R	UR6225L-xx-AF5-F-R	SOT-25	G	I	O	N	N	Tape Reel
UR6225-xx-T92-C-K	UR6225L-xx-T92-C-K	TO-92	G	I	O	-	-	Bulk
UR6225-xx-T92-C-B	UR6225L-xx-T92-C-B	TO-92	G	I	O	-	-	Tape Box

Note: Pin Assignment: I: V_{IN} O: V_{OUT} G: V_{SS} N: No Connection
xx: Output Voltage, refer to Marking Information.

<p>UR6225L-xx-AB3-C-R</p>	<p>(1) R:Tape Reel, K:Bulk, B:Tape Box (2) refer to Pin Assignment (3) AB3:SOT-89, AE3:SOT-23, AF5:SOT-25, T92:TO-92 (4) xx:refer to Marking Information (5) L:Lead Free Plating, Blank:Pb/Sn</p>
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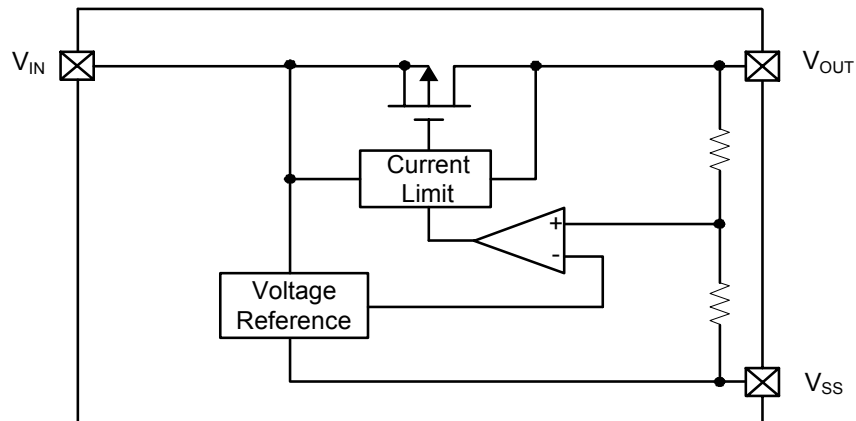


*Pb-free plating product number: UR6225L

MARKING INFORMATION

PACKAGE	VOLTAGE CODE	PIN 1	PIN 2	PIN 3	PIN 4	PIN 4	MARKING
SOT-89	12:1.2V 15:1.5V	V_{SS}	V_{IN}	V_{OUT}	-	-	
SOT-25	18:1.8V 20:2.0V 21:2.1V 25:2.5V 26:2.6V	V_{SS}	V_{IN}	V_{OUT}	NC	NC	
SOT-23	27:2.7V 28:2.8V 2J:2.85V 30:3.0V 33:3.3V 35:3.5V 40:4.0V	V_{OUT}	V_{SS}	V_{IN}	-	-	
TO-92	45:4.5V 50:5.0V 60:6.0V	V_{SS}	V_{IN}	V_{OUT}	-	-	

BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING (Ta=25)

PARAMETER		SYMBOL	RATINGS	UNIT
Input Voltage		V_{IN}	12	V
Output Current		I_{OUT}	500	mA
Output Voltage		V_{OUT}	$V_{SS}-0.3 \sim V_{IN}+0.3$	V
Continuous Total Power Dissipation	SOT-25	P_D	150	mW
	SOT-23		150	
	SOT-89		500	
	TO-92		300	
Junction Temperature		T_J	+125	
Operating Temperature		T_{OPR}	-40 ~ +85	
Storage Temperature		T_{STG}	-40 ~ +150	

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25 , unless otherwise specified)

UR6225-6.0V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=7.0V$	5.880	6.000	6.120	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=7.0V$ $V_{OUT(E)} \geq 4.5V$	250			mA
Load Stability	1	V_{OUT}	$V_{IN}=7.0V$ $1mA \leq I_{OUT} \leq 100mA$		40	80	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=100mA$		120	300	mV
	1	V_{DIF2}	$I_{OUT}=200mA$		380	600	mV
Supply Current	2	I_{SS}	$V_{IN}=7.0V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $7.0V \leq V_{IN} \leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR} \leq 85$		± 100		ppm/

UR6225-5.0V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=6.0V$	4.900	5.000	5.100	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=6.0V$ $V_{OUT(E)} \geq 4.5V$	250			mA
Load Stability	1	V_{OUT}	$V_{IN}=6.0V$ $1mA \leq I_{OUT} \leq 100mA$		40	80	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=100mA$		120	300	mV
	1	V_{DIF2}	$I_{OUT}=200mA$		380	600	mV
Supply Current	2	I_{SS}	$V_{IN}=6.0V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $6.0V \leq V_{IN} \leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR} \leq 85$		± 100		ppm/

■ ELECTRICAL CHARACTERISTICS(Cont.) (Ta=25 , unless otherwise specified)

UR6225-4.5V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=5.5V$	4.410	4.500	4.59	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=5.5V, V_{OUT(E)}\geq 3.6V$	200			mA
Load Stability	1	V_{OUT}	$V_{IN}=5.5V$ $1mA\leq I_{OUT}\leq 100mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=100mA$		170	330	mV
	1	V_{DIF2}	$I_{OUT}=200mA$		400	630	mV
Supply Current	2	I_{SS}	$V_{IN}=5.5V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $5.5V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-4.0V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=5.0V$	3.920	4.000	4.080	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=5.0V, V_{OUT(E)}\geq 3.6V$	200			mA
Load Stability	1	V_{OUT}	$V_{IN}=5.0V$ $1mA\leq I_{OUT}\leq 100mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=100mA$		170	330	mV
	1	V_{DIF2}	$I_{OUT}=200mA$		400	630	mV
Supply Current	2	I_{SS}	$V_{IN}=5.0V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $5.0V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-3.5V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=4.5V$	3.430	3.500	3.570	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=4.5V, V_{OUT(E)}\geq 2.97V$	165			mA
Load Stability	1	V_{OUT}	$V_{IN}=4.5V$ $1mA\leq I_{OUT}\leq 86mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=86mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=172mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=4.5V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $4.5V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR}\leq 85$		± 100		ppm/

■ ELECTRICAL CHARACTERISTICS(Cont.) (Ta=25 , unless otherwise specified)

UR6225-3.3V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=4.3V$	3.234	3.300	3.366	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=4.3V, V_{OUT(E)} \geq 2.97V$	165			mA
Load Stability	1	V_{OUT}	$V_{IN}=4.3V$ $1mA \leq I_{OUT} \leq 86mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=86mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=172mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=4.3V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $4.3V \leq V_{IN} \leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR} \leq 85$		± 100		ppm/

UR6225-3.0V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=4.0V$	2.940	3.000	3.060	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=4.0V, V_{OUT(E)} \geq 2.7V$	150			mA
Load Stability	1	V_{OUT}	$V_{IN}=4.0V$ $1mA \leq I_{OUT} \leq 80mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=80mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=160mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=4.0V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $4.0V \leq V_{IN} \leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR} \leq 85$		± 100		ppm/

UR6225-2.85V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=3.85V$	2.793	2.85	2.907	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.85V, V_{OUT(E)} \geq 2.565V$	150			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.85V$ $1mA \leq I_{OUT} \leq 77mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=77mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=154mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.85V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $3.85V \leq V_{IN} \leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR} \leq 85$		± 100		ppm/

■ ELECTRICAL CHARACTERISTICS(Cont.) (Ta=25 , unless otherwise specified)

UR6225-2.8V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA$, $V_{IN}=3.8V$	2.744	2.800	2.856	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.8V$, $V_{OUT(E)}\geq 2.52V$	150			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.8V$ $1mA\leq I_{OUT}\leq 76mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=76mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=152mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.8V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN}\times V_{OUT}}$	$I_{OUT}=40mA$ $3.8V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR}\times V_{OUT}}$	$I_{OUT}=40mA$ $-40\leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-2.7V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA$, $V_{IN}=3.7V$	2.646	2.700	2.754	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.7V$, $V_{OUT(E)}\geq 2.52V$	150			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.7V$ $1mA\leq I_{OUT}\leq 76mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=76mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=152mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.7V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN}\times V_{OUT}}$	$I_{OUT}=40mA$ $3.7V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR}\times V_{OUT}}$	$I_{OUT}=40mA$ $-40\leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-2.6V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA$, $V_{IN}=3.6V$	2.548	2.600	2.652	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.6V$, $V_{OUT(E)}\geq 2.34V$	150			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.6V$ $1mA\leq I_{OUT}\leq 72mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=72mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=144mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.6V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN}\times V_{OUT}}$	$I_{OUT}=40mA$ $3.6V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR}\times V_{OUT}}$	$I_{OUT}=40mA$ $-40\leq T_{OPR}\leq 85$		± 100		ppm/

■ ELECTRICAL CHARACTERISTICS(Cont.) (Ta=25 , unless otherwise specified)

UR6225-2.5V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=3.5V$	2.45	2.500	2.55	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.5V, V_{OUT(E)}\geq 2.25V$	125			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.5V$ $1mA\leq I_{OUT}\leq 70mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=70mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=140mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.5V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN}\times V_{OUT}}$	$I_{OUT}=40mA$ $3.5V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR}\times V_{OUT}}$	$I_{OUT}=40mA$ $-40\leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-2.1V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=3.1V$	2.058	2.100	2.142	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.1V, V_{OUT(E)}\geq 1.89V$	125			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.1V$ $1mA\leq I_{OUT}\leq 62mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=62mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=124mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.1V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN}\times V_{OUT}}$	$I_{OUT}=40mA$ $3.1V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR}\times V_{OUT}}$	$I_{OUT}=40mA$ $-40\leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-2.0V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=3.0V$	1.960	2.000	2.040	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=3.0V, V_{OUT(E)}\geq 1.8V$	100			mA
Load Stability	1	V_{OUT}	$V_{IN}=3.0V$ $1mA\leq I_{OUT}\leq 60mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=60mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=120mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=3.0V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN}\times V_{OUT}}$	$I_{OUT}=40mA$ $3.0V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR}\times V_{OUT}}$	$I_{OUT}=40mA$ $-40\leq T_{OPR}\leq 85$		± 100		ppm/

■ ELECTRICAL CHARACTERISTICS(Cont.) (Ta=25 , unless otherwise specified)

UR6225-1.8V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=2.8V$	1.764	1.800	1.836	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=2.8V, V_{OUT(E)}\geq 1.62V$	100			mA
Load Stability	1	V_{OUT}	$V_{IN}=2.8V$ $1mA\leq I_{OUT}\leq 60mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=56mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=112mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=2.8V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $2.8V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-1.5V (Note1)

PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=2.5V$	1.470	1.500	1.530	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=2.5V, V_{OUT(E)}\geq 1.62V$	100			mA
Load Stability	1	V_{OUT}	$V_{IN}=2.5V$ $1mA\leq I_{OUT}\leq 60mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=56mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=112mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=2.5V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $2.5V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR}\leq 85$		± 100		ppm/

UR6225-1.2V (Note1)

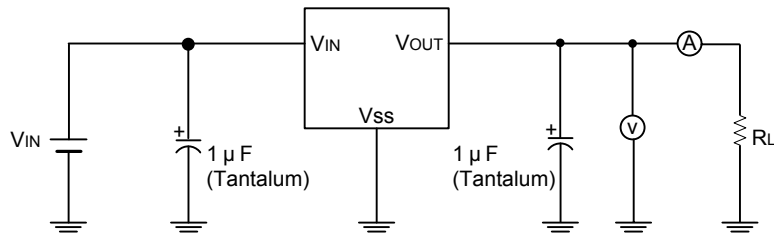
PARAMETER	CIRCUIT	SYMBOL	TEST CONDITONS	MIN	TYP	MAX	UNIT
Output Voltage	1	$V_{OUT(E)}$ (Note2)	$I_{OUT}=40mA, V_{IN}=2.5V$	1.176	1.200	1.224	V
Maximum Output Current	1	$I_{OUT(MAX)}$	$V_{IN}=2.2V, V_{OUT(E)}\geq 1.62V$	100			mA
Load Stability	1	V_{OUT}	$V_{IN}=2.2V$ $1mA\leq I_{OUT}\leq 60mA$		45	90	mV
Input-Output Voltage Differential(Note3)	1	V_{DIF1}	$I_{OUT}=56mA$		180	360	mV
	1	V_{DIF2}	$I_{OUT}=112mA$		400	700	mV
Supply Current	2	I_{SS}	$V_{IN}=2.2V$		2.0	4.5	μA
Input Stability	1	$\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$	$I_{OUT}=40mA$ $2.2V\leq V_{IN}\leq 10.0V$		0.2	0.3	%/V
Input Voltage		V_{IN}				10	V
Thermal Shutdown					150		
Output Voltage Temperature Characteristics	1	$\frac{V_{OUT}}{T_{OPR} \times V_{OUT}}$	$I_{OUT}=40mA$ $-40 \leq T_{OPR}\leq 85$		± 100		ppm/

Note:

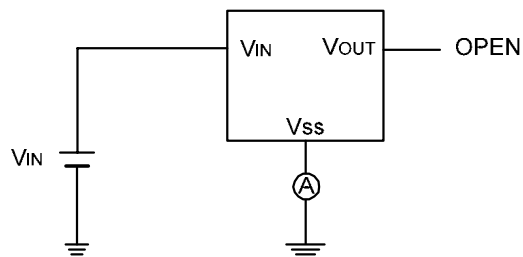
- $V_{OUT(T)}$ =Specified Output Voltage.
- $V_{OUT(E)}$ =Effective Output Voltage (i.e. the output voltage when " $V_{OUT(T)}+1.0V$ " is provided at the V_{IN} pin while maintaining a certain I_{OUT} value).
- $V_{DIF} = \{V_{IN1}^{(Note4)} - V_{OUT(E)}\}$
- V_{IN1} = The input voltage at the time 98% of $V_{OUT(E)}$ is output (input voltage has been gradually reduced).

■ TEST CIRCUITS

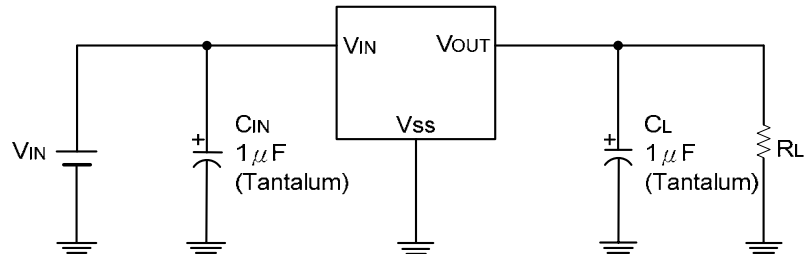
Circuit 1



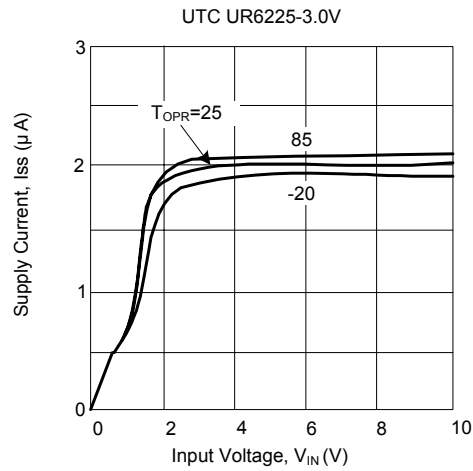
Circuit 2



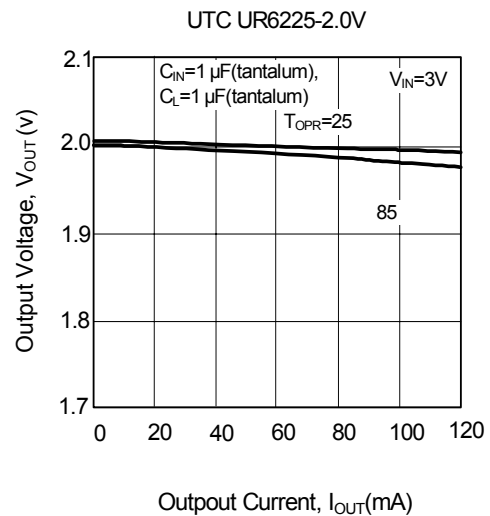
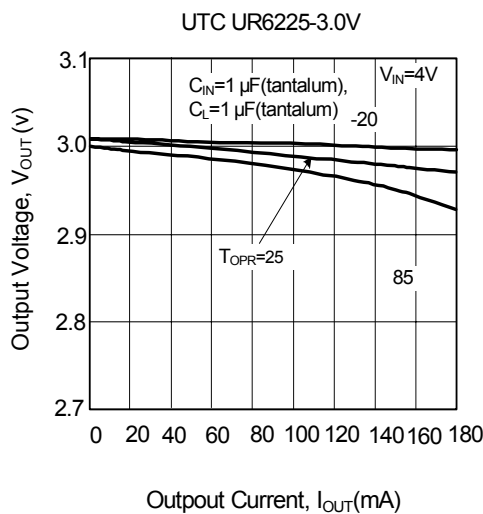
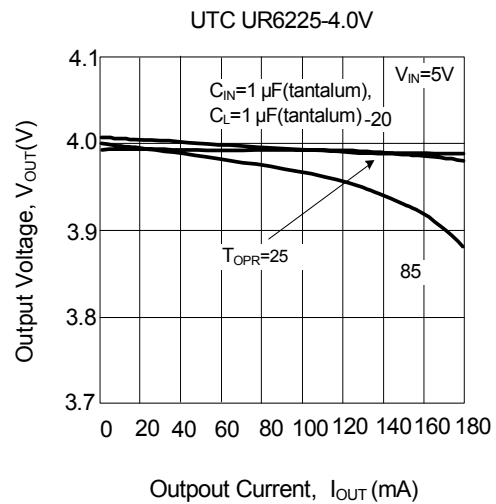
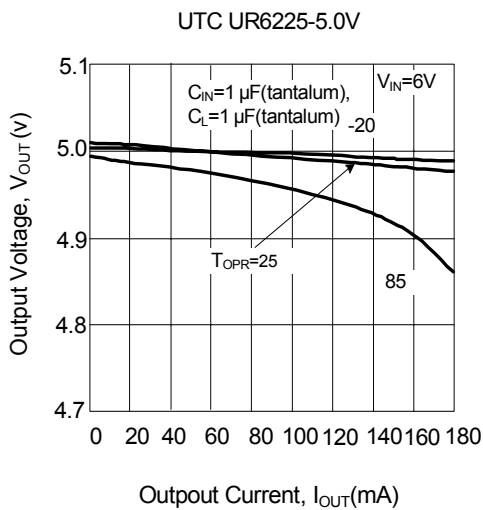
■ TYPICAL APPLICATION CIRCUIT



■ TYPICAL CHARACTERISTIC



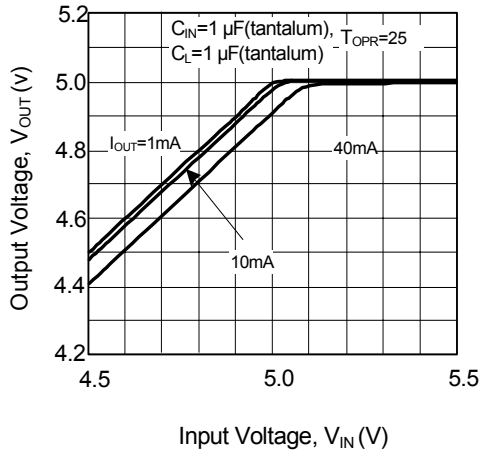
(1) OUTPUT VOLTAGE VS. OUTPUT CURRENT



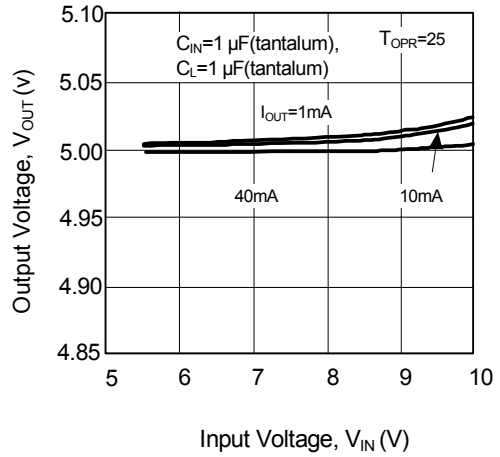
■ TYPICAL CHARACTERISTIC(Cont.)

(2) OUTPUT VOLTAGE VS. INPUT VOLTAGE

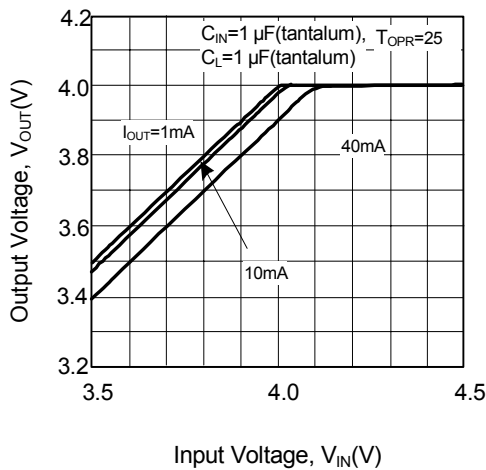
UTC UR6225-5.0V



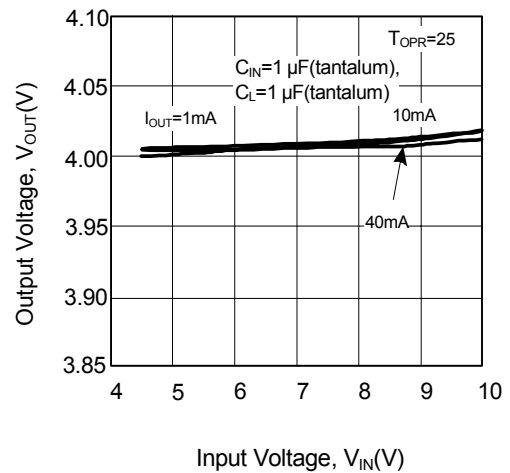
UTC UR6225-5.0V



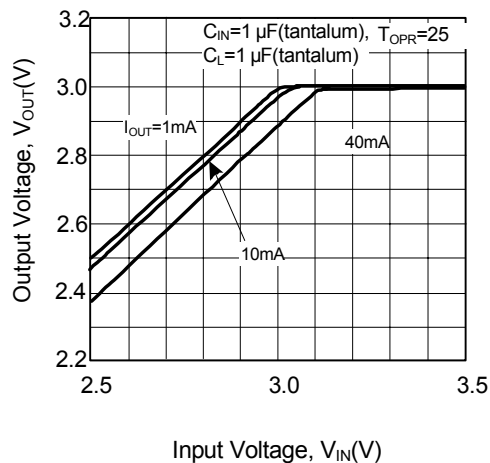
UTC UR6225-4.0V



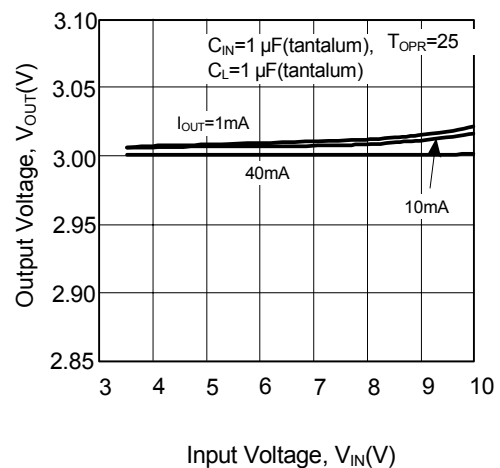
UTC UR6225-4.0V



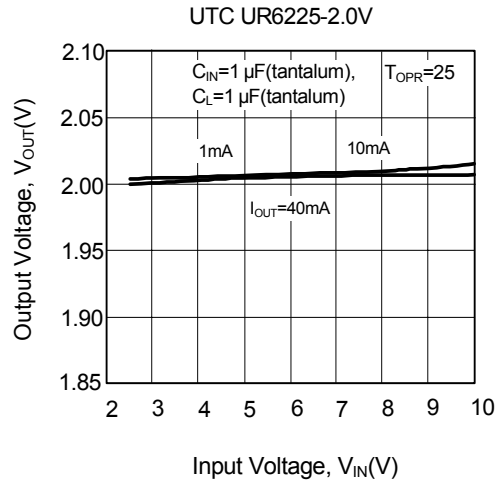
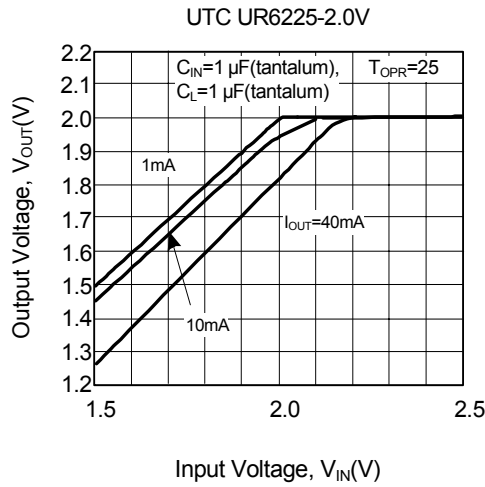
UTC UR6225-3.0V



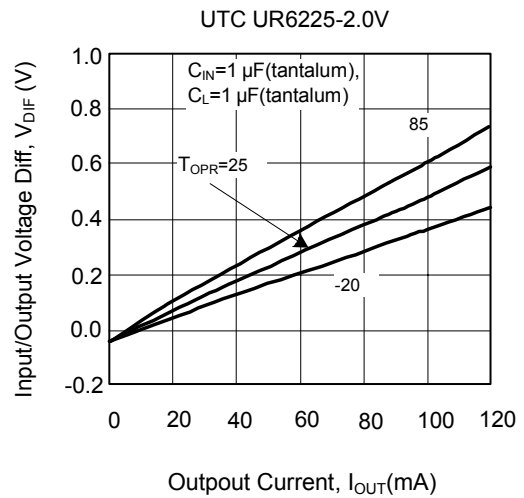
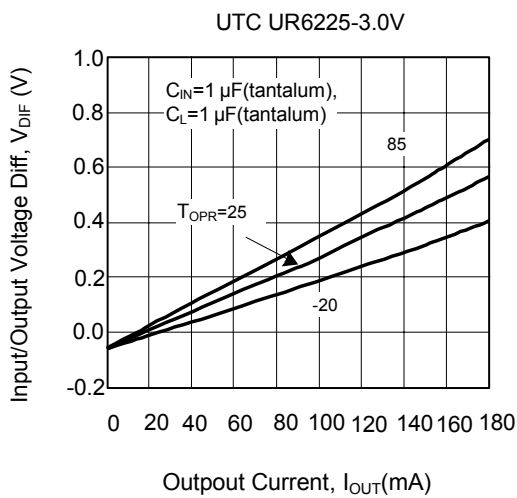
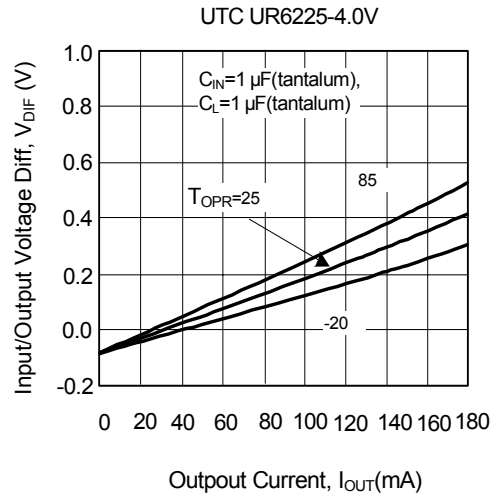
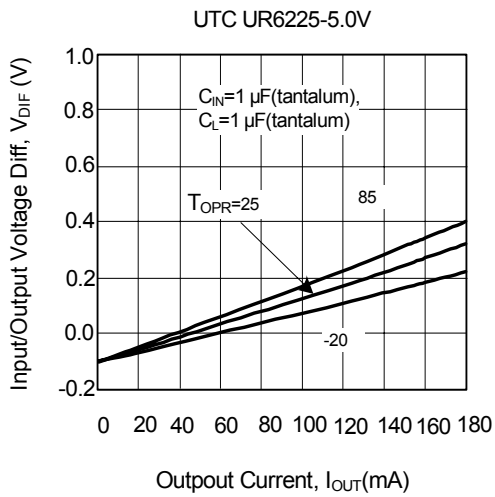
UTC UR6225-3.0V



■ TYPICAL CHARACTERISTIC(Cont.)

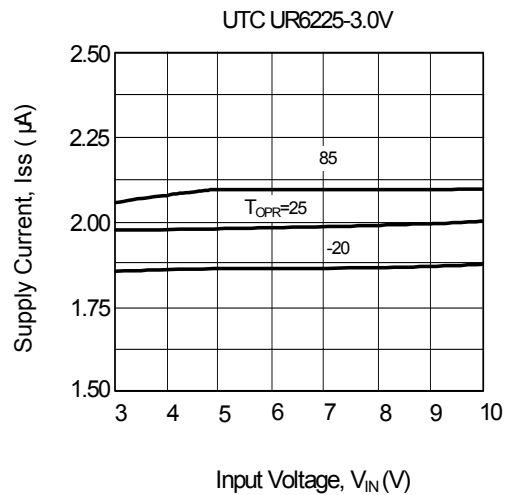
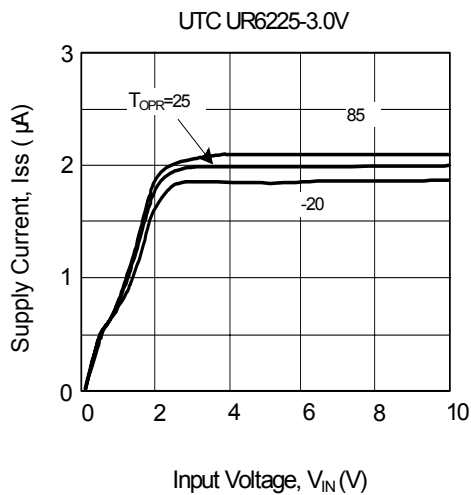
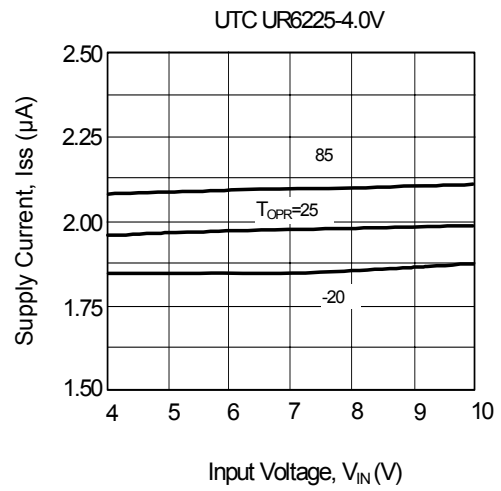
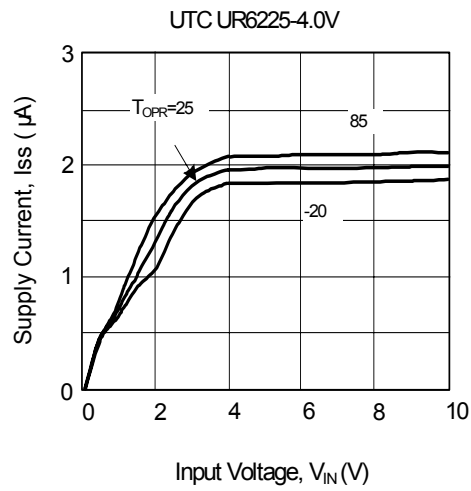
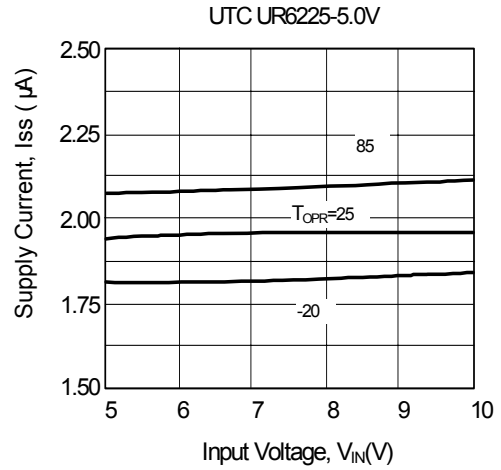
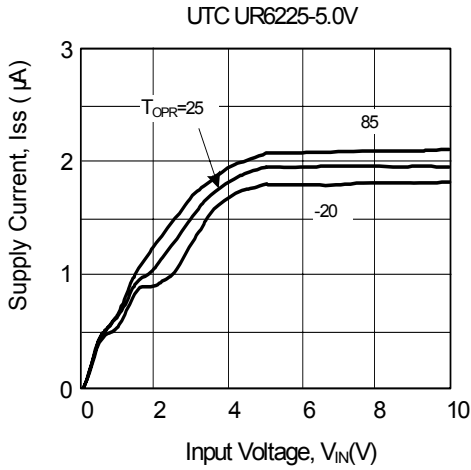


(3) INPUT/OUTPUT VOLTAGE DIFFERENTIAL VS. OUTPUT CURRENT

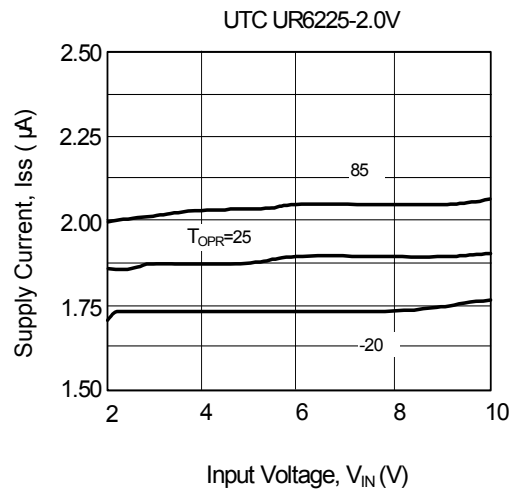
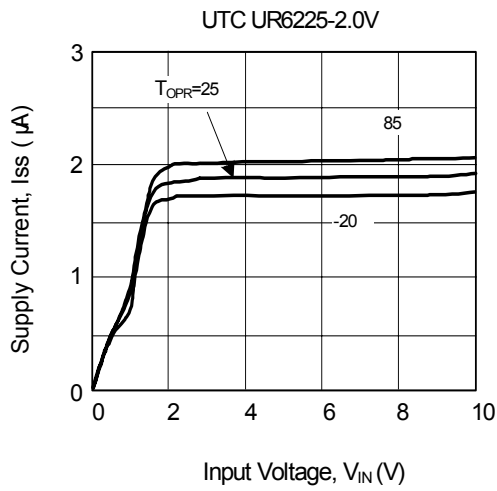


■ TYPICAL CHARACTERISTIC(Cont.)

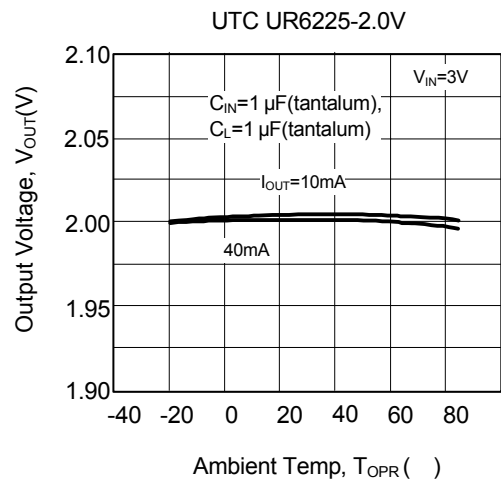
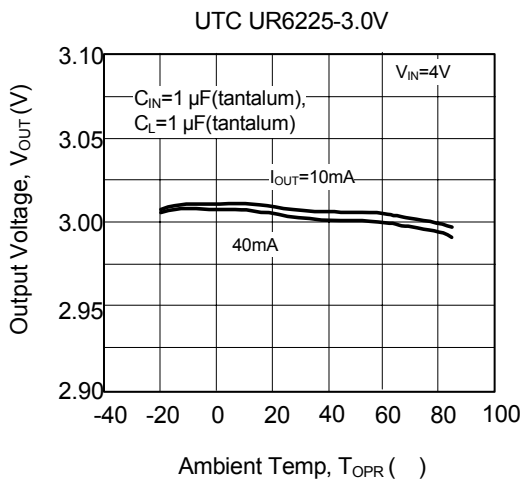
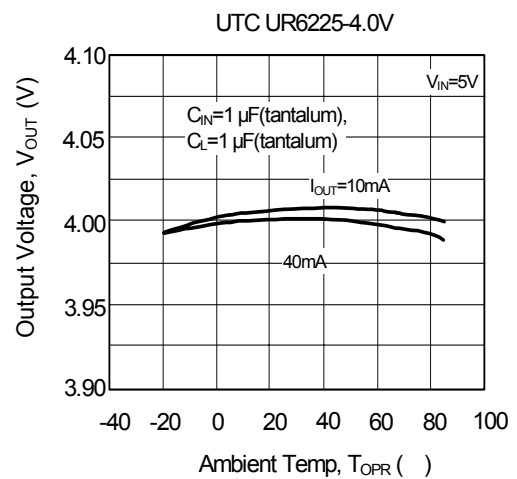
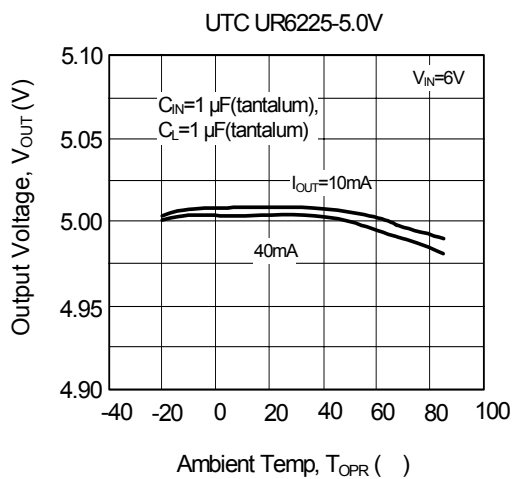
(4) SUPPLY CURRENT VS. INPUT VOLTAGE



■ TYPICAL CHARACTERISTIC(Cont.)

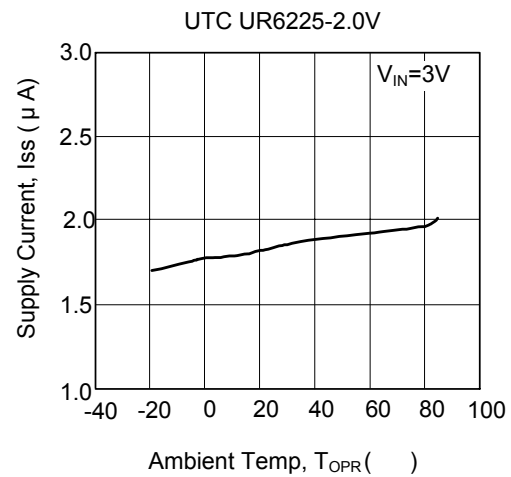
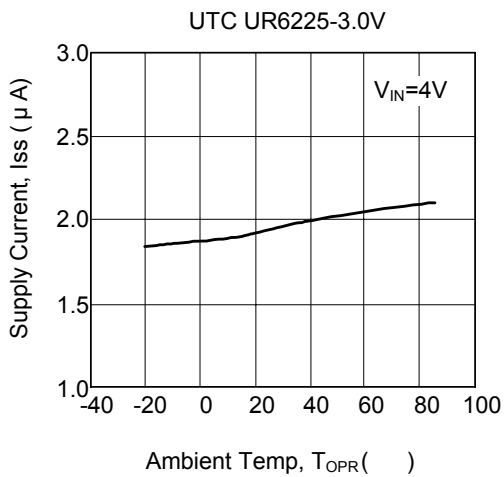
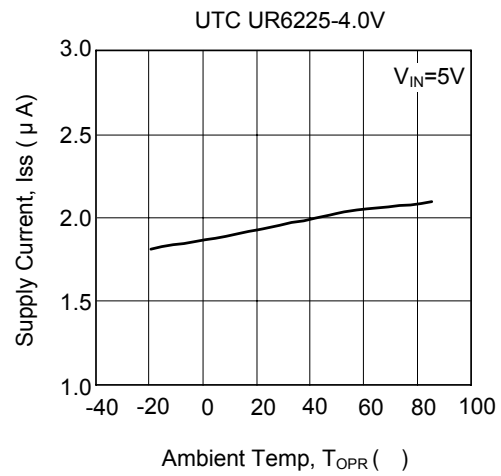
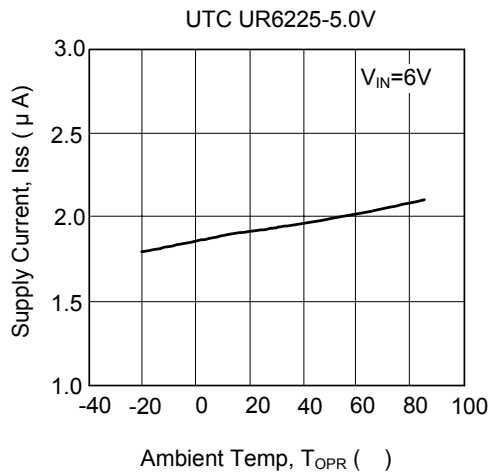


(5) OUTPUT VOLTAGE VS. AMBIENT TEMPERATURE

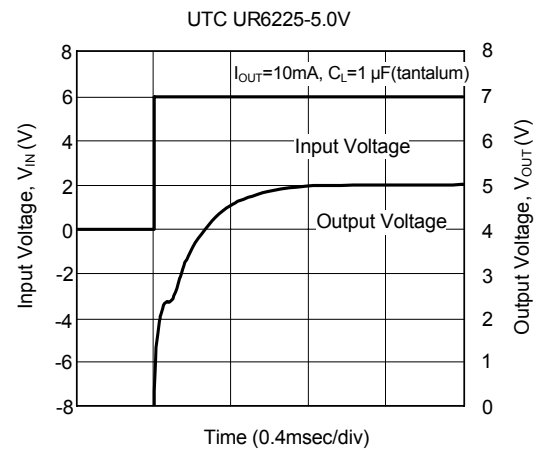
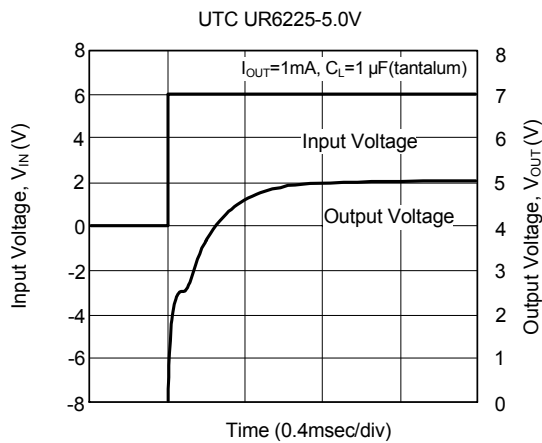


■ TYPICAL CHARACTERISTIC(Cont.)

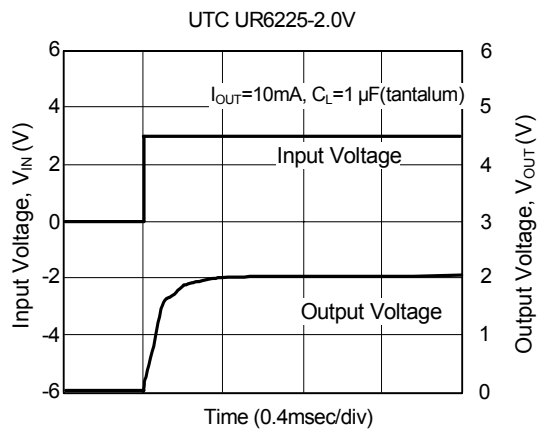
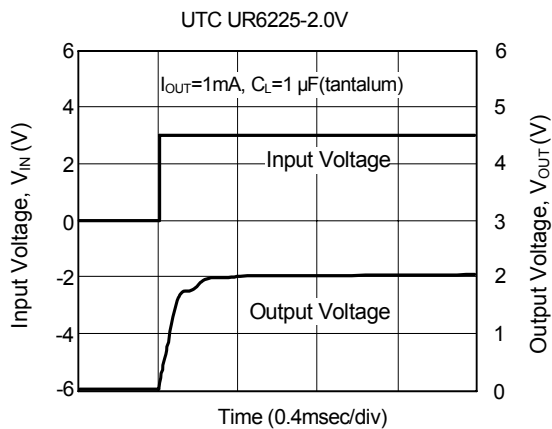
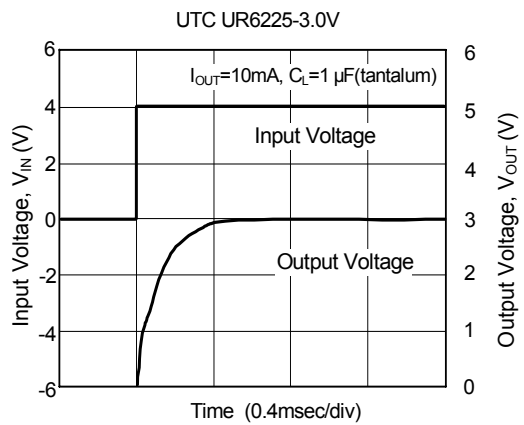
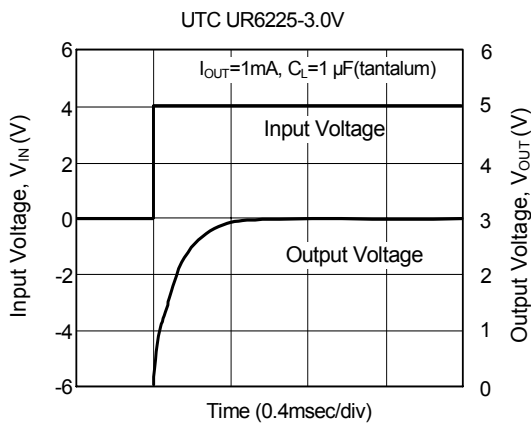
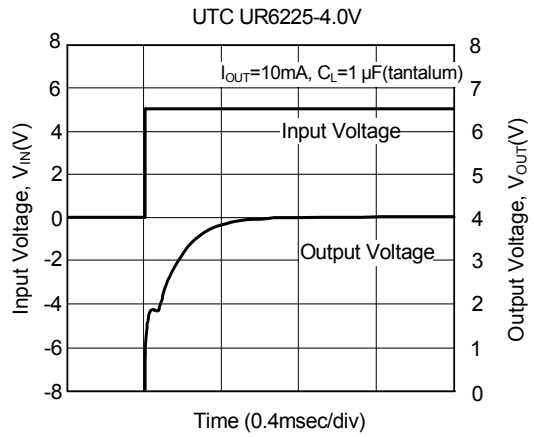
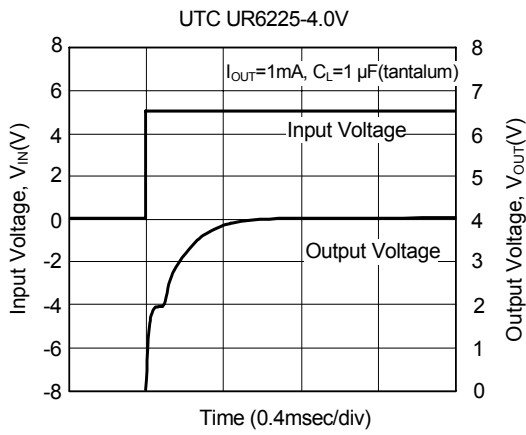
(6) SUPPLY CURRENT VS. AMBIENT TEMPERATURE



(7) INPUT TRANSIENT RESPONSE 1

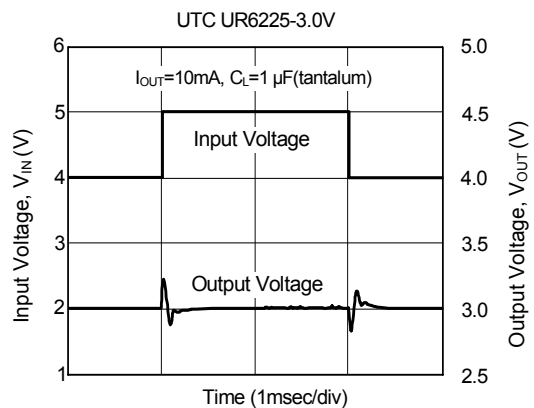
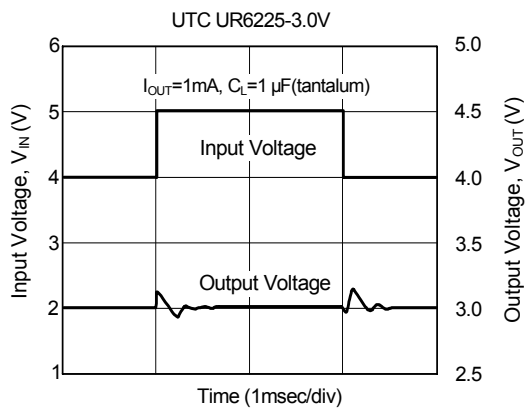
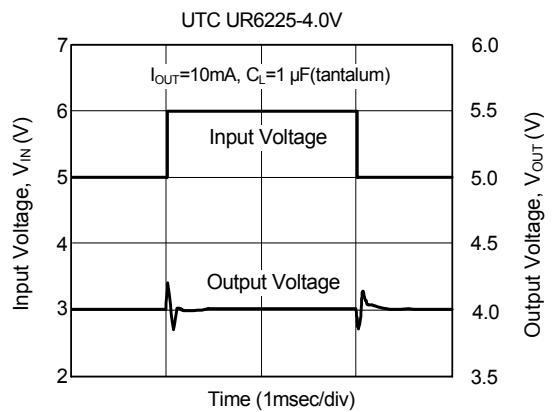
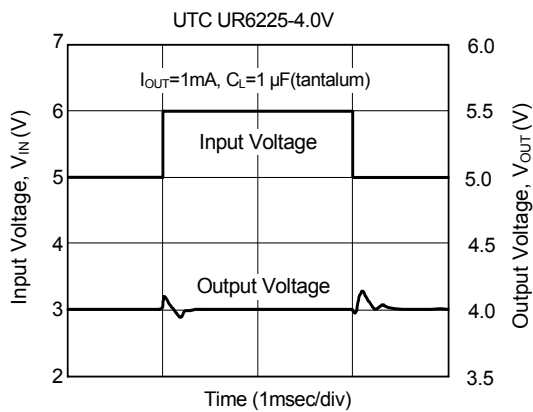
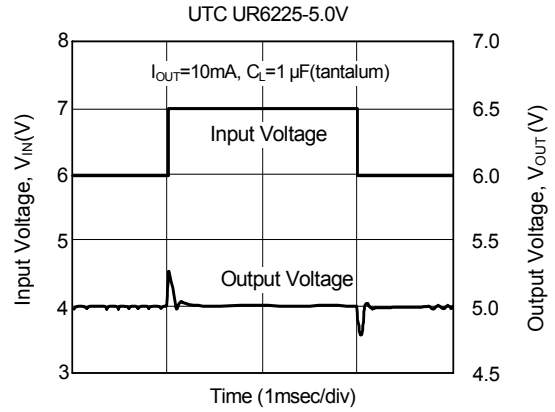
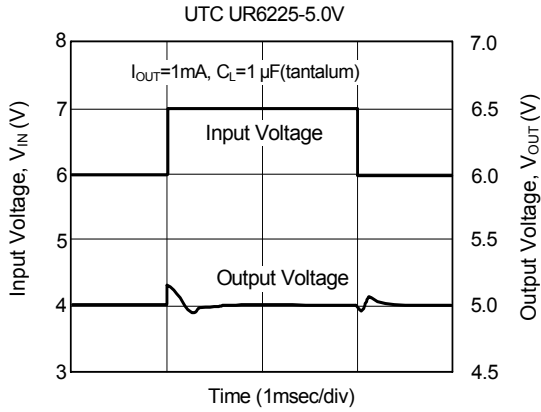


■ TYPICAL CHARACTERISTIC(Cont.)

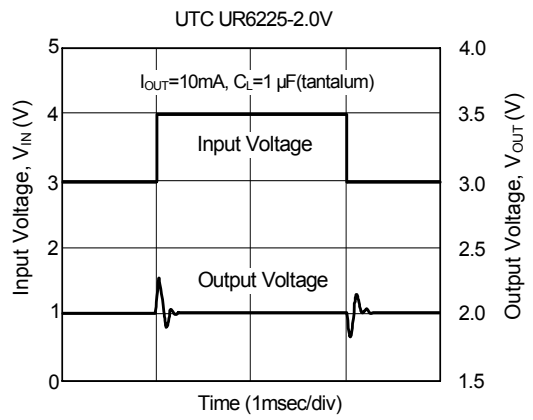
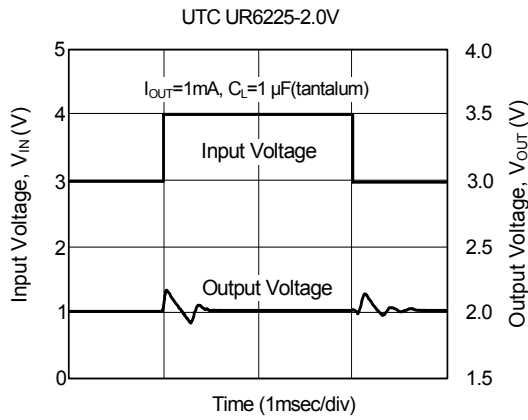


■ TYPICAL CHARACTERISTIC(Cont.)

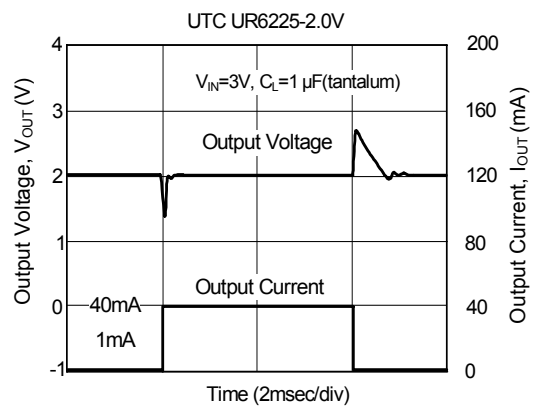
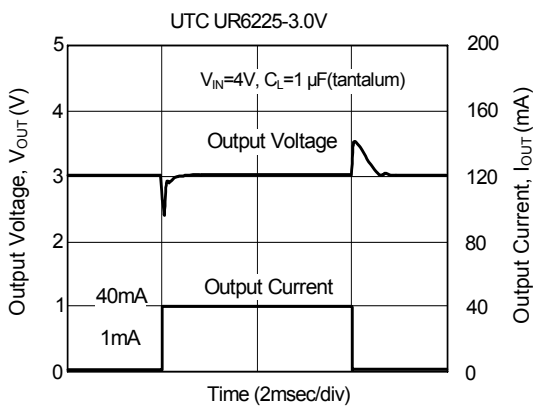
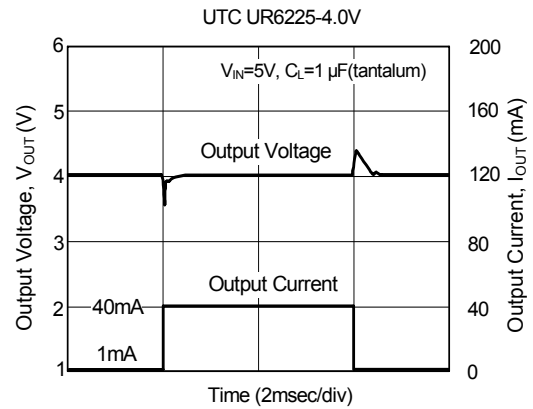
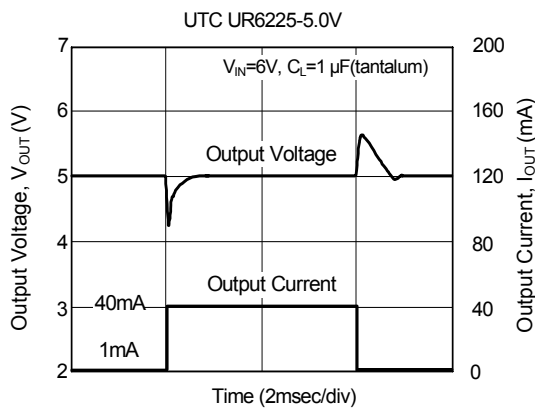
(8) INPUT TRANSIENT RESPONSE 2



■ TYPICAL CHARACTERISTIC(Cont.)

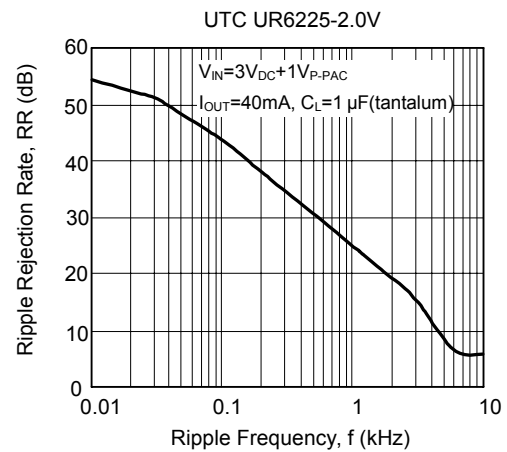
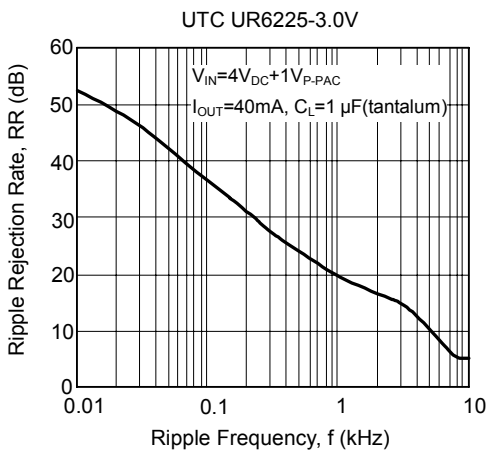
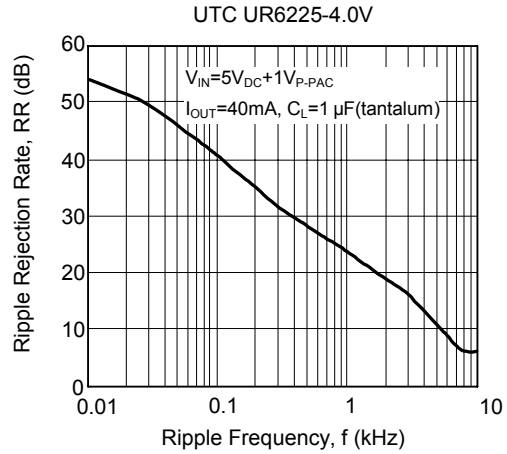
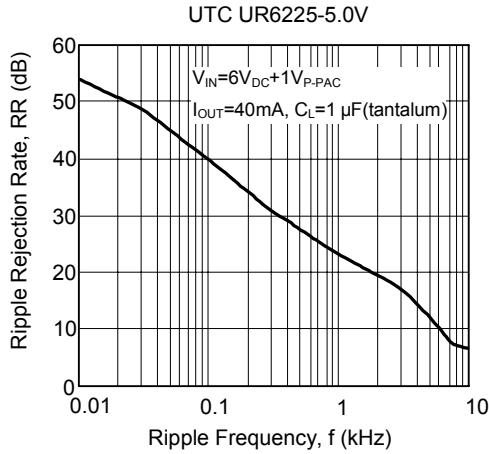


(9) LOAD TRANSIENT RESPONSE



■ TYPICAL CHARACTERISTIC(Cont.)

(10) RIPPLE REJECTION RATE



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