



UNISONIC TECHNOLOGIES CO.,LTD.

RXXLD10

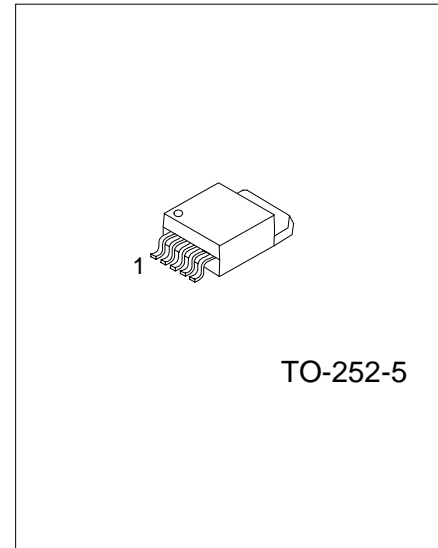
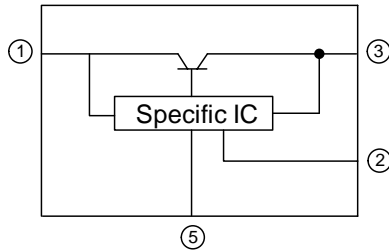
LINEAR INTEGRATED CIRCUIT

LOW VOLTAGE OPERATION LOW POWER-LOSS VOLTAGE REGULATORS

■ FEATURES

- * Low voltage operation (Minimum operating voltage: 2.35V) 2.5V input available 1.5 ~ 1.8V
- * Low dissipation current
- * Built-in overcurrent protection and over temperature protection functions

■ EQUIVALENT



*Pb-free plating product number: RXXLD10L

■ PIN DESCRIPTION

PIN NO.	PIN NAME
1	INPUT
2	ON/OFF
3	OUTPUT
4	NC
5	GND

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead Free Plating		
RXXLD10-TN5-R	RXXLD10L-TN5-R	TO-252-5	Tape Reel

Note: xx: Output Voltage, refer to Marking Information.

■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
TO-252-5	15:1.5V 18:1.8V 25:2.5V 03:3.0V 33:3.3V	

■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V _{IN}	10	V
ON/OFF Control Terminal Voltage (Note 2)	V _C	10	V
Output Current	I _{OUT}	1.0	A
Power Dissipation (with infinite heat sink)	P _D	8	W
Junction Temperature	T _J	125	°C
Operating Temperature	T _{OPR}	-20 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +150	°C

Note 1. 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.

2: All are open except GND and applicable terminals.

3. The device is guaranteed to meet performance specification within 0°C~70°C operating temperature range and assured by design from -20°C~85°C.

■ ELECTRICAL CHARACTERISTICS

(V_{IN} = V_{O(TYP.)}+1V, I_{OUT} = 0.5A, V_C = 2.7V, Ta = 25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
Input Voltage	R15LD10	V _{IN}		2.35		10	V
	R18LD10			2.35		10	
	R25LD10			V _{OUT} +0.5		10	
	R03LD10			V _{OUT} +0.5		10	
	R33LD10			V _{OUT} +0.5		10	
Output Voltage	R15LD10	V _{OUT}		1.45	1.5	1.55	V
	R18LD10			1.75	1.8	1.85	
	R25LD10			2.438	2.5	2.562	
	R03LD10			2.925	3	3.075	
	R33LD10			3.218	3.3	3.382	
Voltage for Control (Note 1)	ON	V _{C(ON)}		2		V	
	OFF	V _{C(OFF)}			0.8	V	
Current for Control	ON	I _{C(ON)}			200	μA	
	OFF	I _{C(OFF)}	V _C = 0.4V		2	μA	
Quiescent Current	I _Q	I _{OUT} = 0A		1	2	mA	
Output Off-state Dissipation Current	I _{QS}	I _{OUT} = 0A, V _C = 0.4V			5	μA	
Load Regulation	ΔV _{OUT}	I _{OUT} = 5mA ~ 1A		0.2	2	%	
Line Regulation	ΔV _{OUT}	V _{IN} = V _{O(TYP.)} +1V~V _{O(TYP.)} +6V I _{OUT} = 5mA		0.1	1	%	
Dropout Voltage(Note 2)	V _D	I _{OUT} = 0.5A		0.2	0.5	V	
Temperature Coefficient of Output Voltage	T _C V _O	T _J = 0 ~ 125°C, I _{OUT} = 5mA		±0.01		%/°C	
Ripple Rejection	RR	Refer to Fig.2	45	60		dB	

Note 1: In case of opening control terminal pin 2, output voltage turns off.

2: Input voltage shall be the value when output voltage is 95% in comparison with the initial value.

TEST CIRCUIT

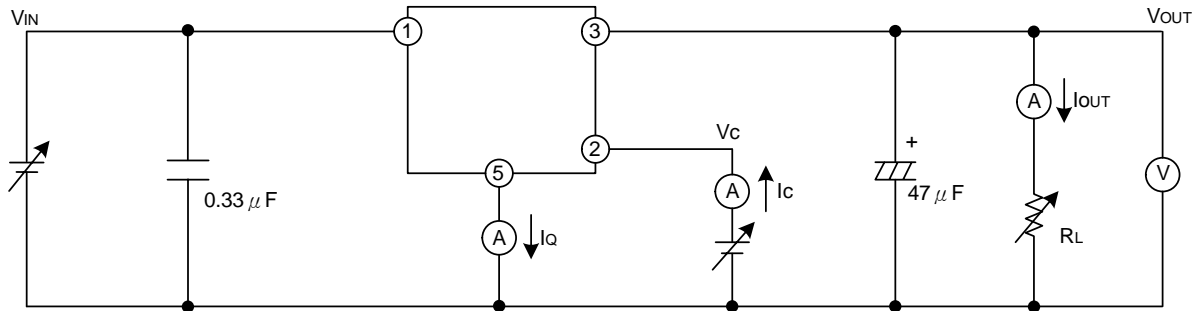
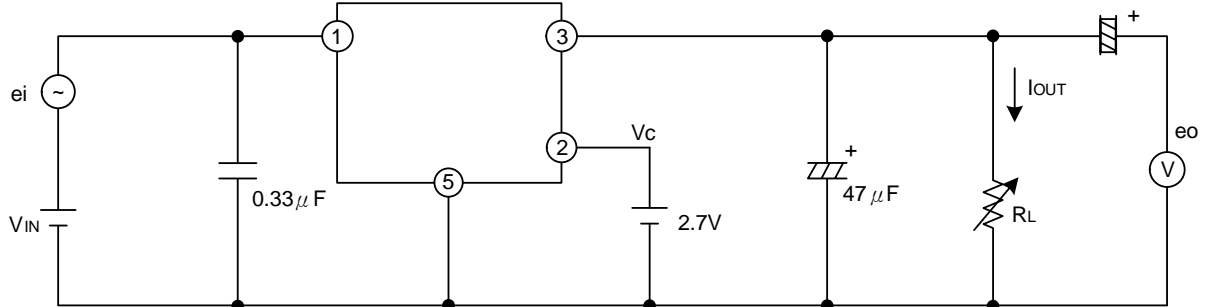


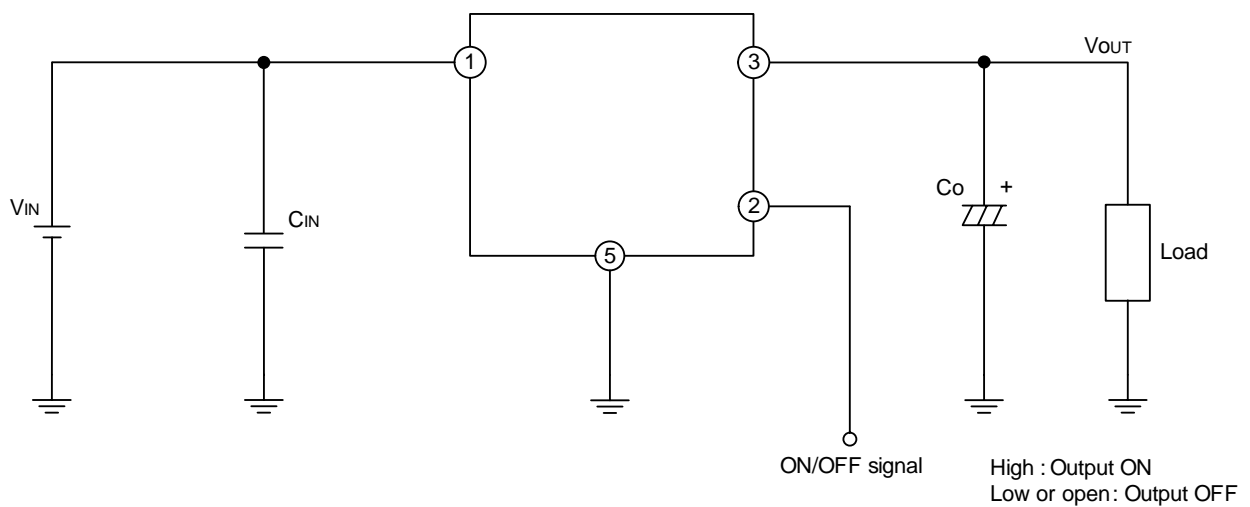
Fig.1



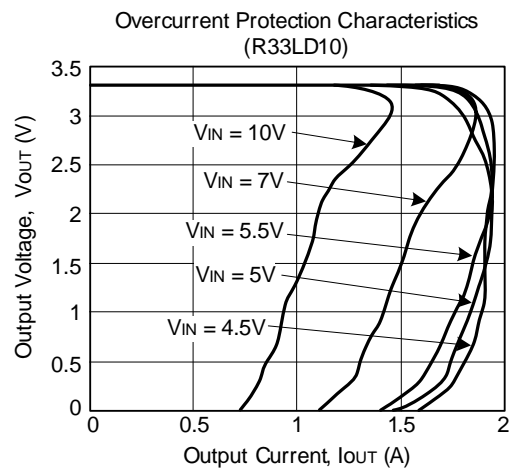
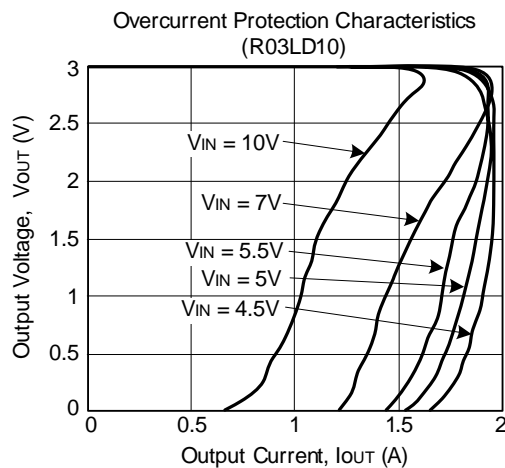
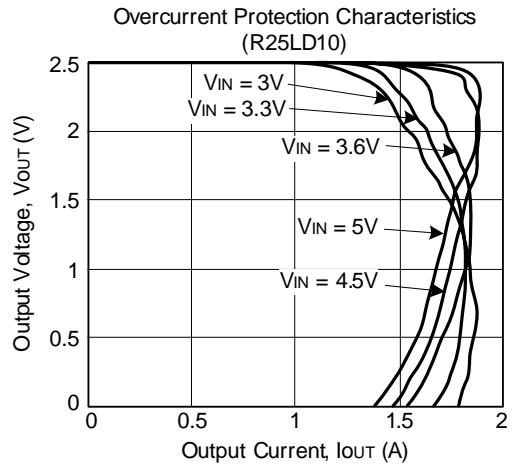
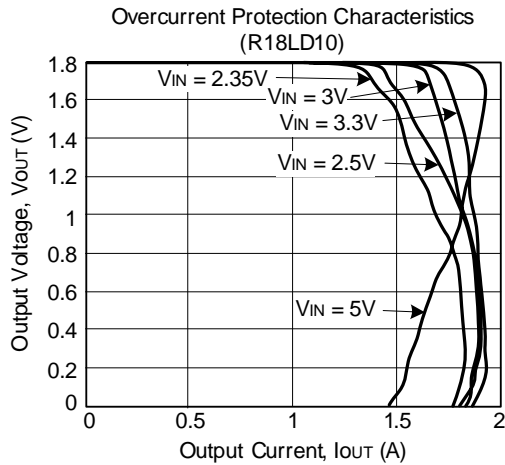
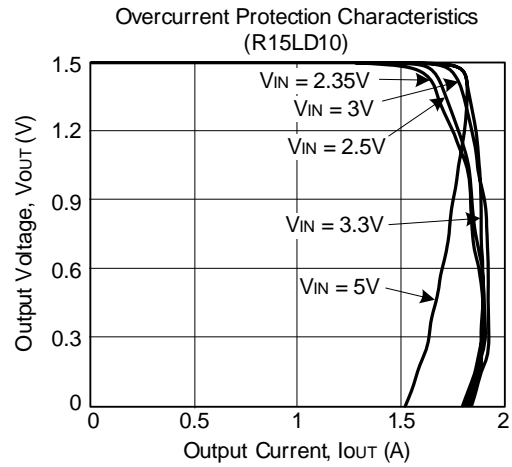
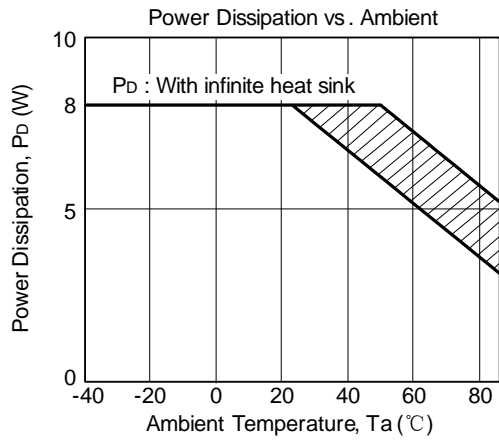
$f = 120\text{Hz}$ (sine wave), e_i (rms) = 0.5V, $V_{IN} = V_O$ (TYP)+2V, $I_{OUT} = 0.5\text{A}$, $RR = 20\log(e_i \text{ (rms)} / e_o \text{ (rms)})$

Fig.2 For Ripple Rejection

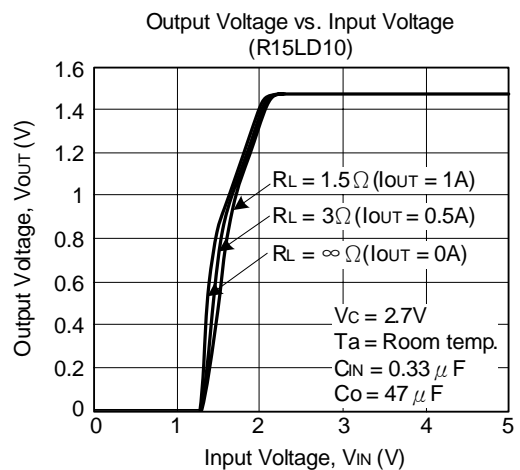
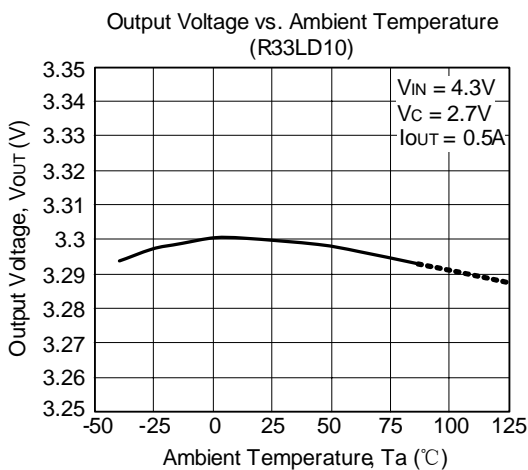
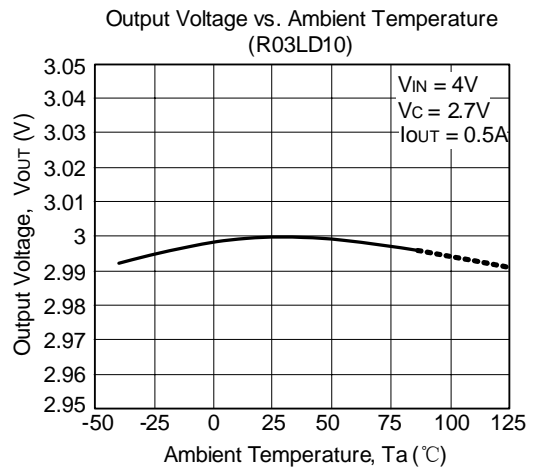
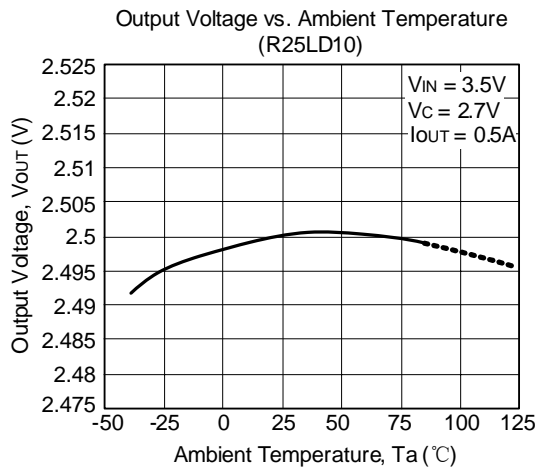
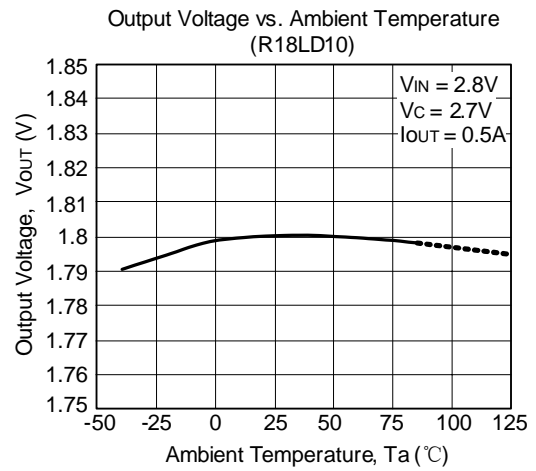
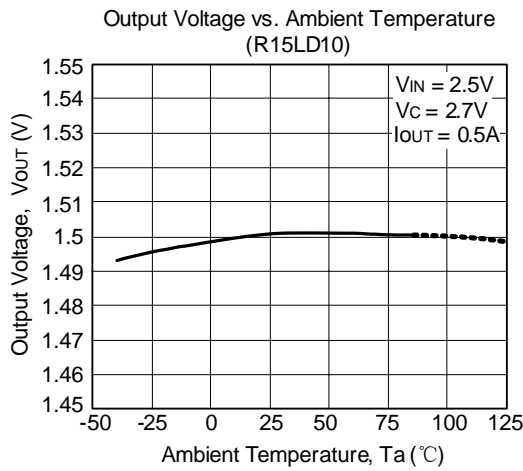
TYPICAL APPLICATION CIRCUIT



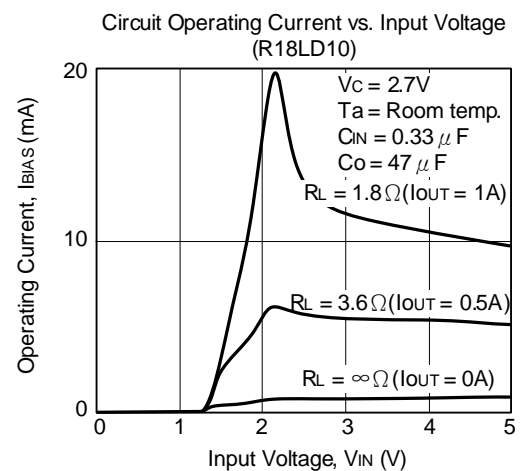
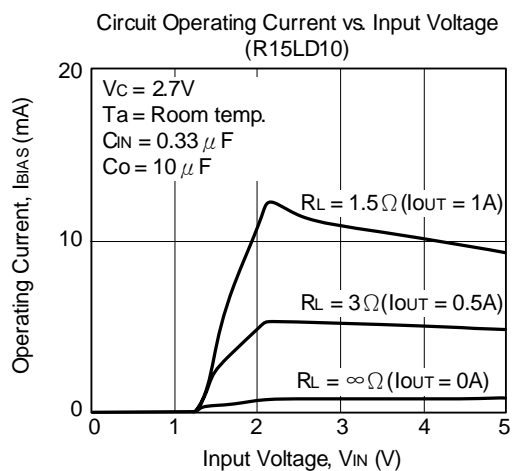
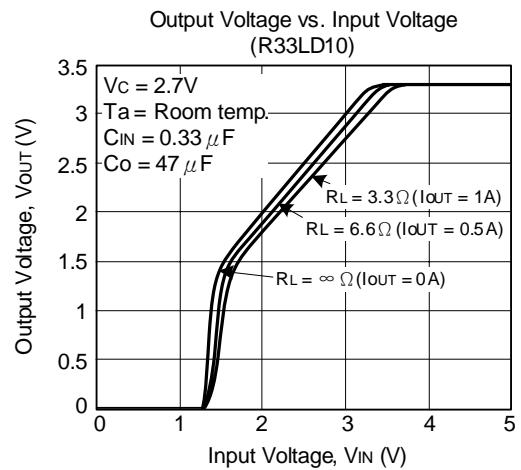
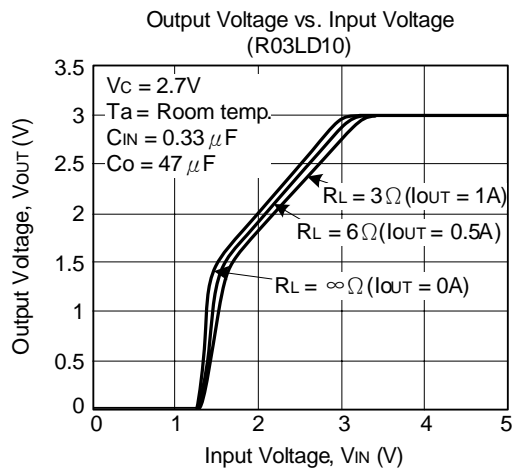
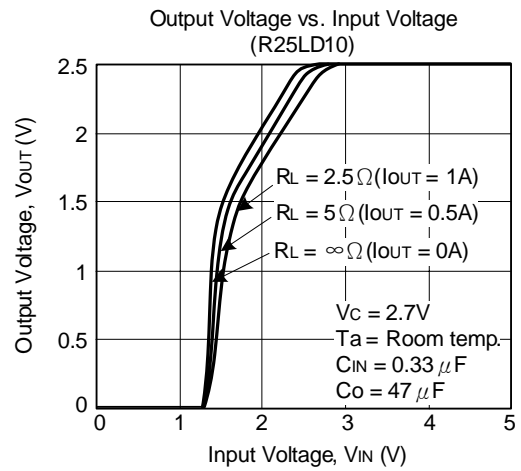
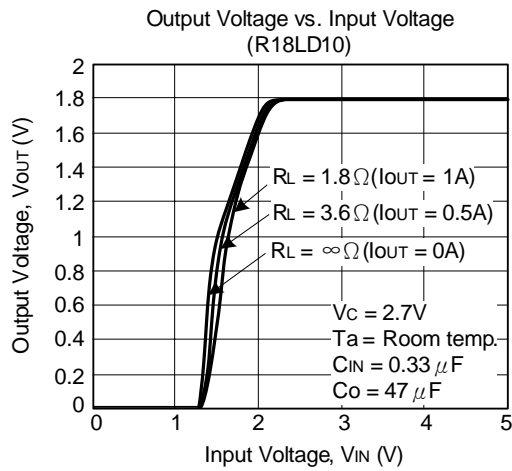
TYPICAL CHARACTERISTICS



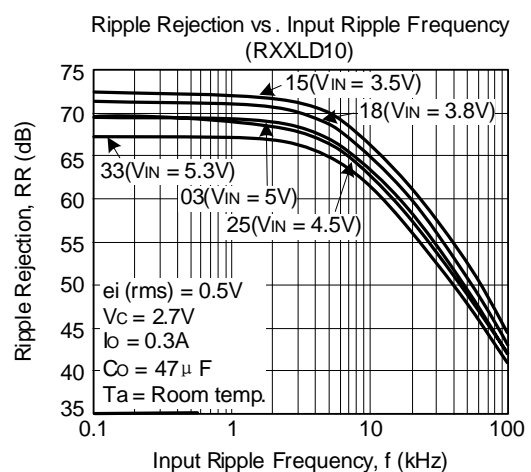
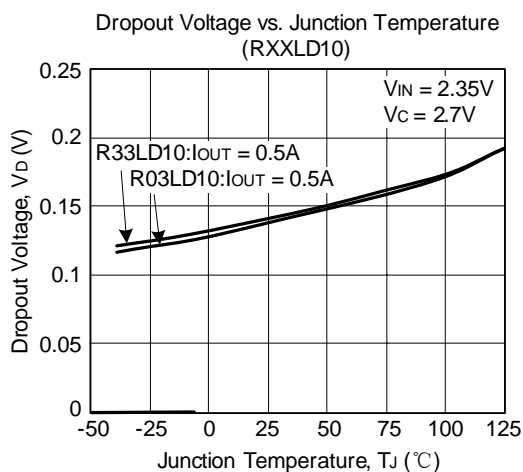
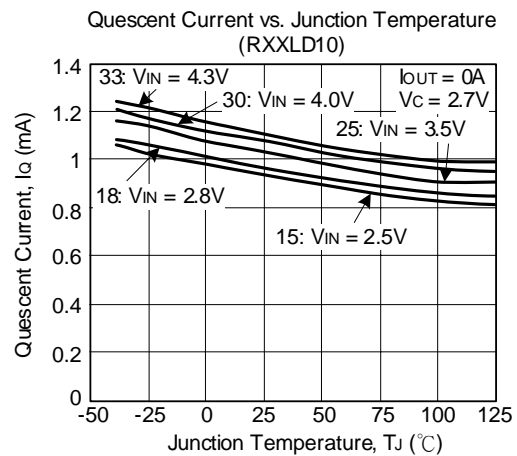
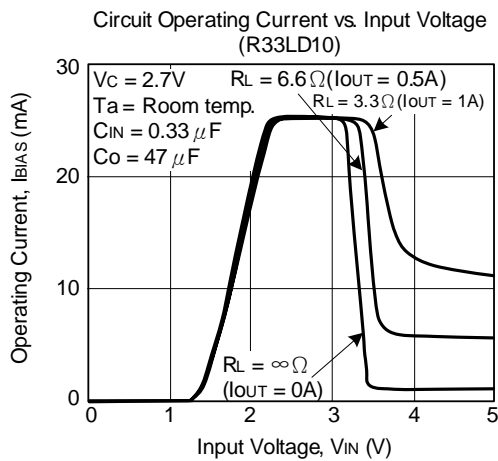
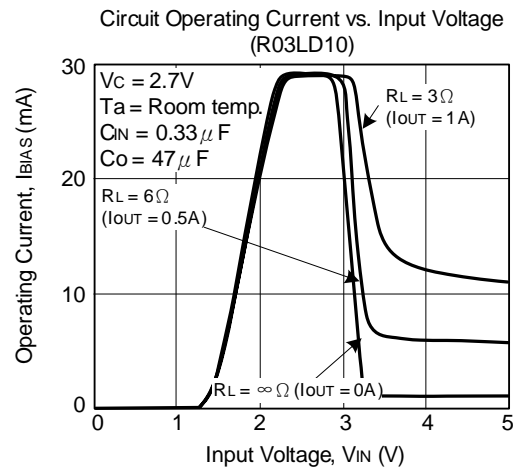
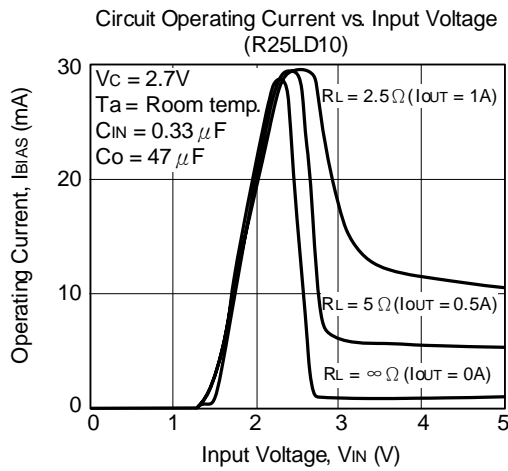
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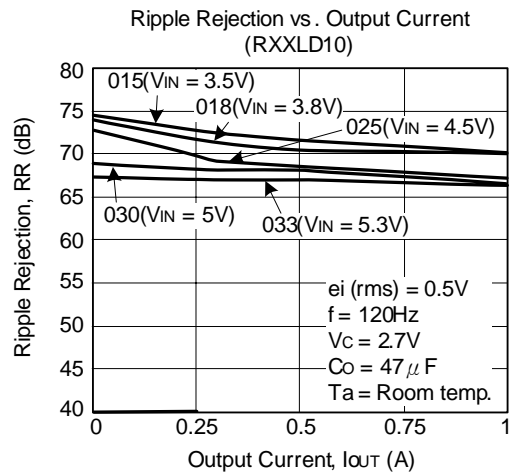
■ TYPICAL CHARACTERISTICS(cont.)



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■ TYPICAL CHARACTERISTICS(cont.)



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