



RXXLD10

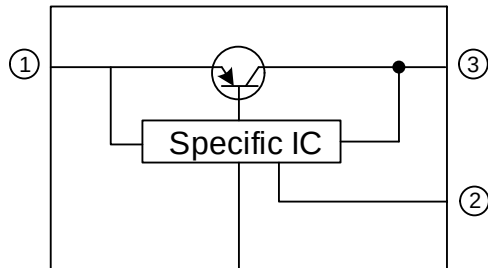
LINEAR INTEGRATED CIRCUIT

LOW VOLTAGE OPERATION LOW POWER-LOSS VOLTAGE REGULATORS

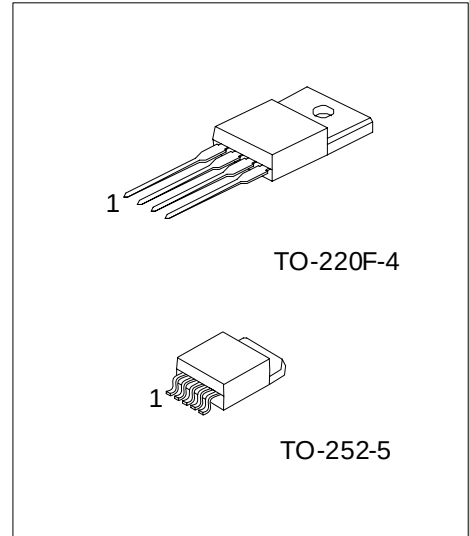
■ FEATURES

- * Operating under low voltage range (Minimum: 2.35V)
input 2.5V, available output around 1.5 ~ 1.8V
- * Low dissipation current
- * Built-in overcurrent protection and over temperature protection functions

■ EQUIVALENT



⑤ / ④ For TO-220F-4 Package



*Pb-free plating product number: RXXLD10L

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead Free Plating		
RXXLD10-TF4-T	RXXLD10L-TF4-T	TO-220F-4	Tube
RXXLD10-TN5-R	RXXLD10L-TN5-R	TO-252-5	Tape Reel
RXXLD10-TN5-T	RXXLD10L-TN5-T	TO-252-5	Tube

RXXLD10L-TF4-R	(1)Packing Type	(1) R: Tape Reel, T: Tube
	(2)Package Type	(2) TF4: TO-220F-4, TN5: TO-252-5
	(3)Lead Plating	(3) L: Lead Free Plating, Blank: Pb/Sn
	(4)Output Voltage Code	(4) xx: refer to Marking Information

■ PIN DESCRIPTION

PIN NO.		PIN NAME
TO-220F-4	TO-252-5	
1	1	INPUT
2	2	ON/OFF
3	3	OUTPUT
-	4	NC
4	5	GND

■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
TO-220F-4	15:1.5V 18:1.8V 25:2.5V 03:3.0V 33:3.3V	
TO-252-5		

■ 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	+150	°C
Operating Temperature	T_{OPR}	-40 ~ +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.

■ ELECTRICAL CHARACTERISTICS

($V_{IN} = V_{O(TYP)} + 1V$, $I_{OUT} = 0.5A$, $V_C = 2.7V$, $T_a = 25^\circ C$, 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}	$I_{OUT} = 5mA \sim 1A$		0.2	2	%
Line Regulation	ΔV_{OUT}	$V_{IN} = V_{O(TYP)} + 1V \sim V_{O(TYP)} + 6V$ $I_{OUT} = 5mA$		0.1	1	%
Dropout Voltage (Note 2)	V_D	$I_{OUT} = 1A$		0.2	0.5	V
Temperature Coefficient of Output Voltage	$T_C V_O$	$T_J = 0 \sim 125^\circ C$, $I_{OUT} = 5mA$		± 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

TO-220F-4 Package:

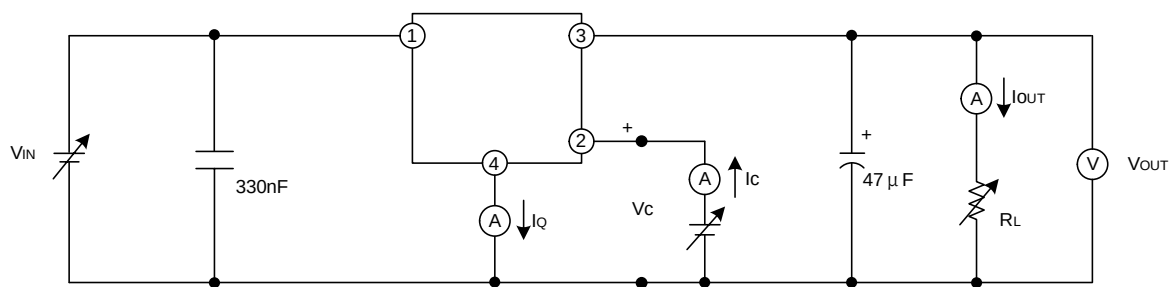


Fig.1

TO-252-5 Package:

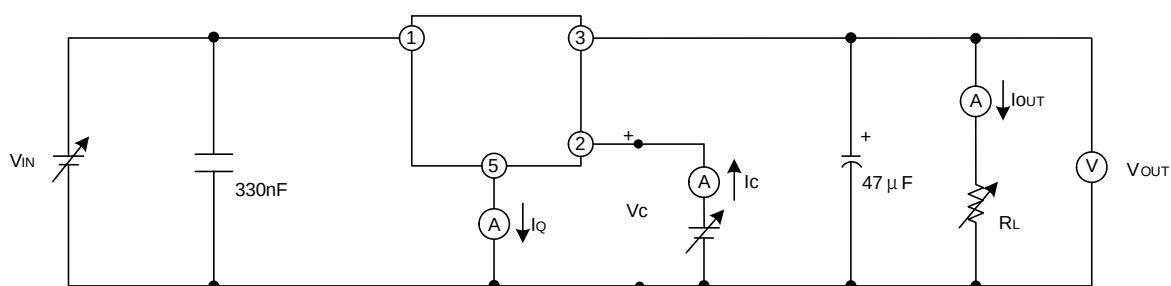
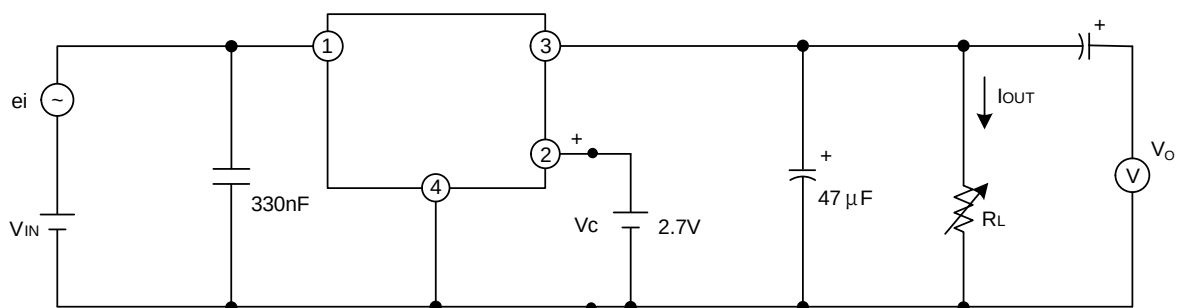


Fig.2

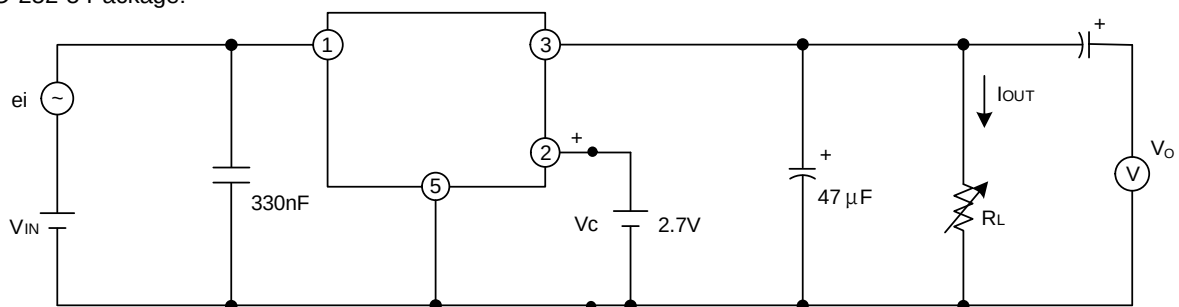
TO-220F-4 Package:



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

Fig.3 For Ripple Rejection

TO-252-5 Package:



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

Fig.4 For Ripple Rejection

■ TYPICAL APPLICATION CIRCUIT

TO-220F-4 Package:

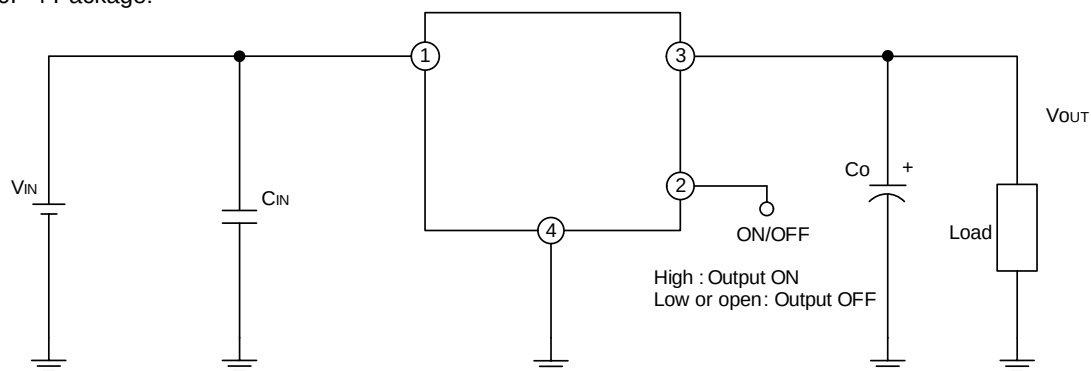


Fig. 5

TO-252-5 Package:

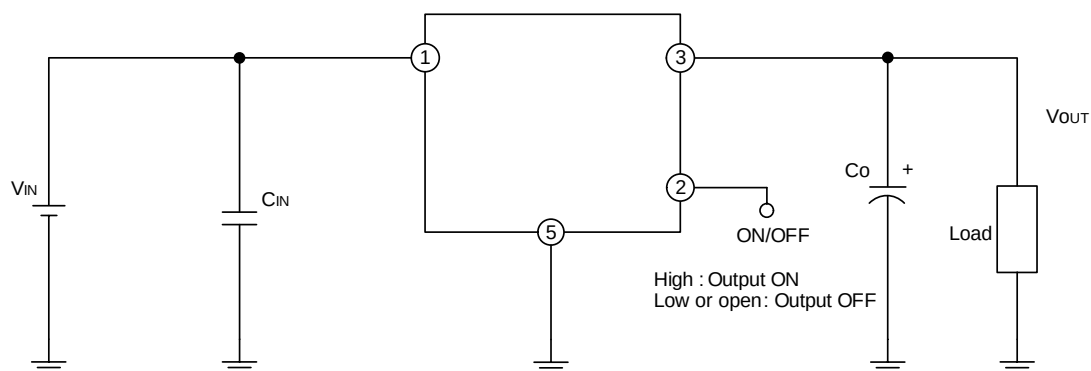
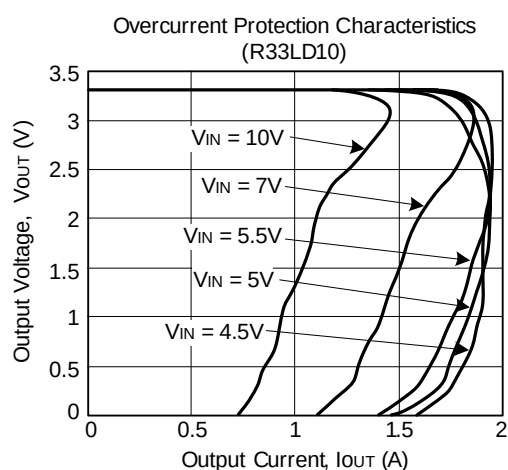
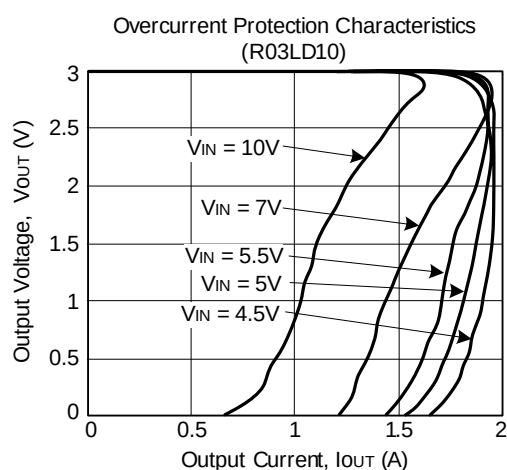
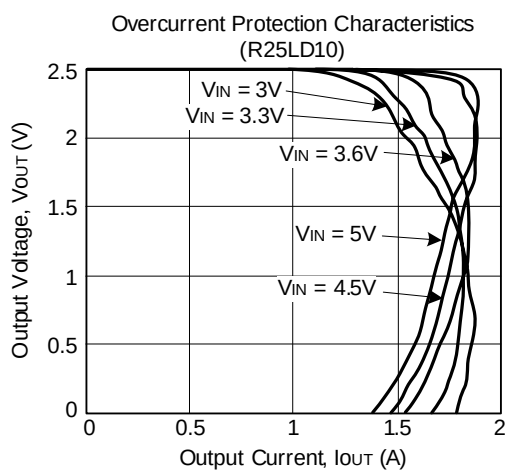
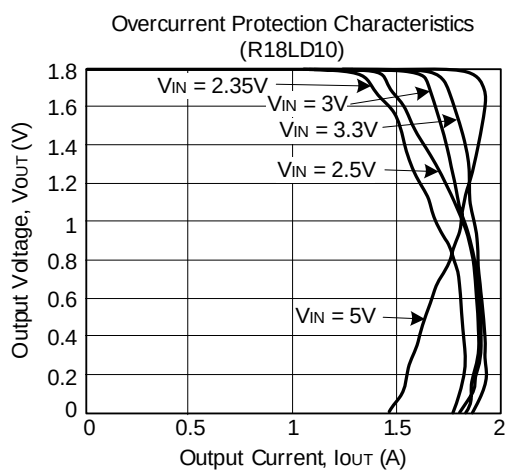
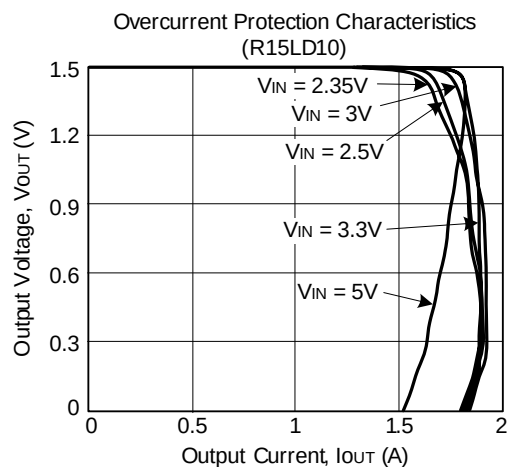
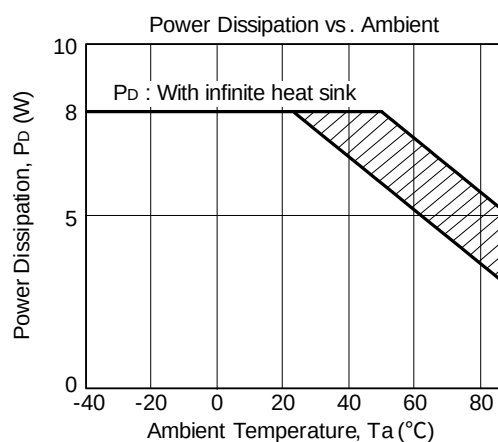
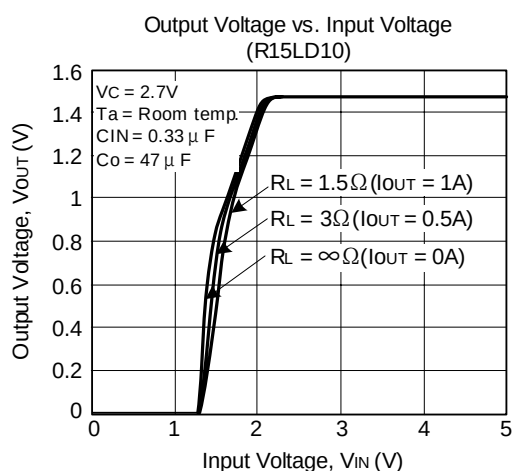
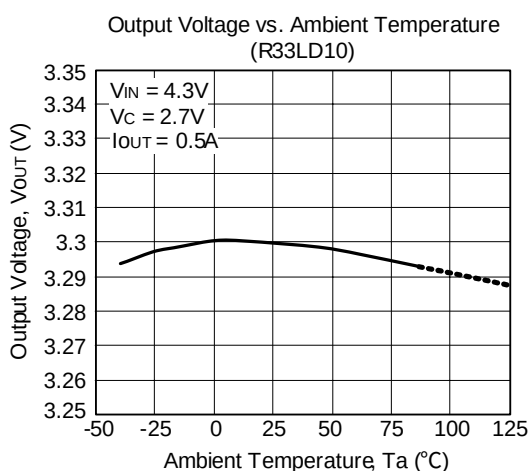
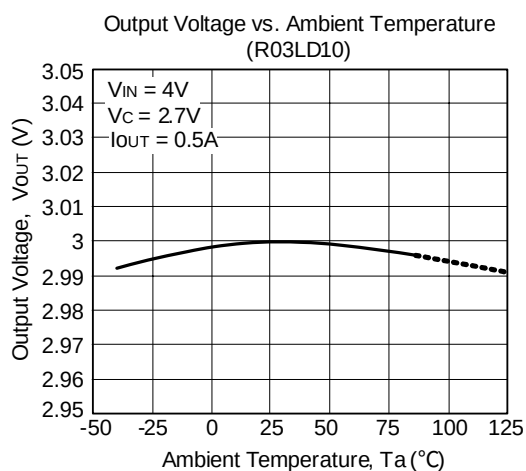
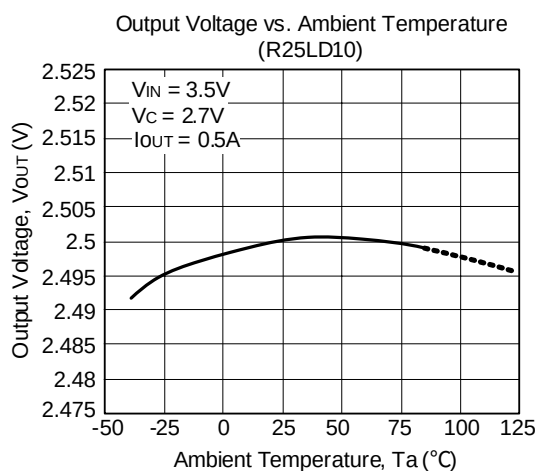
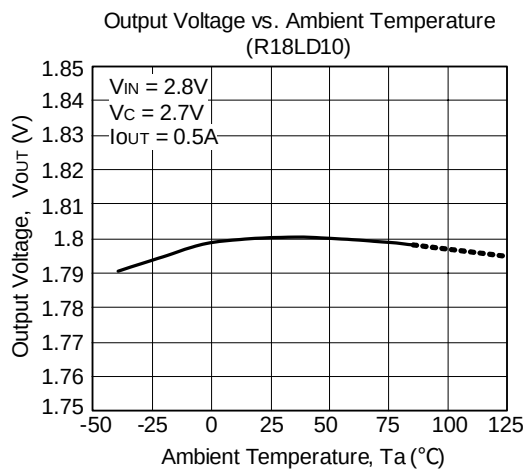
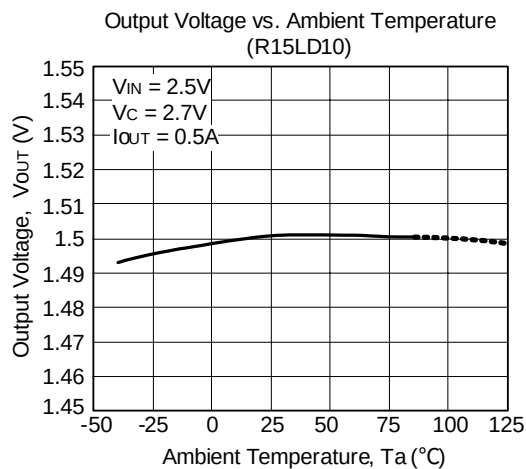


Fig. 6

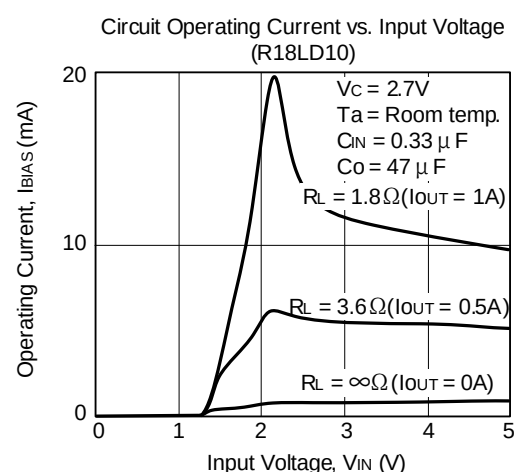
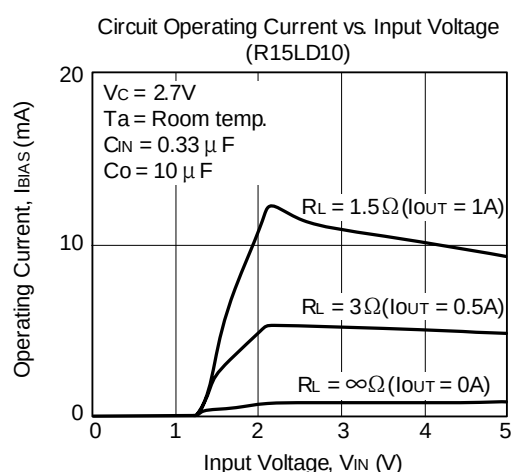
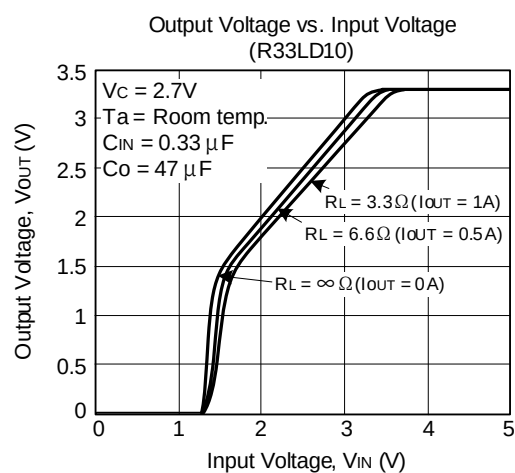
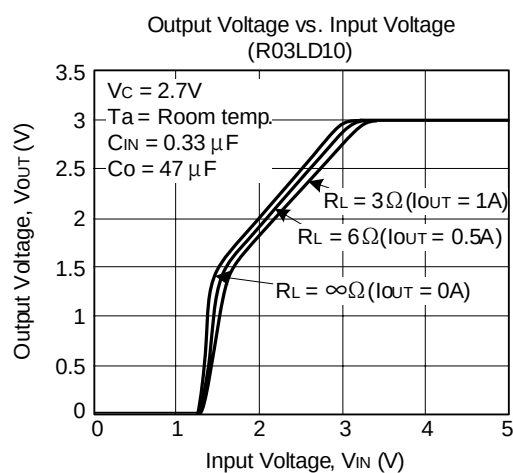
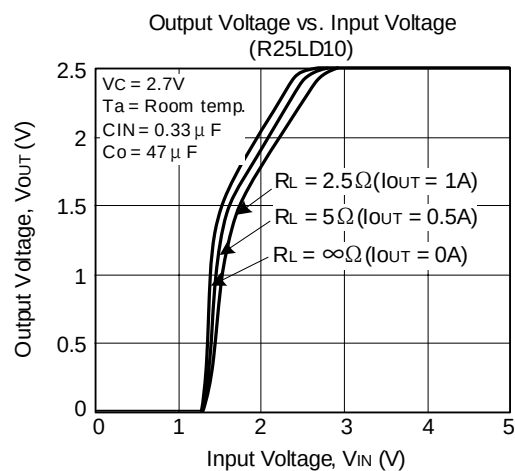
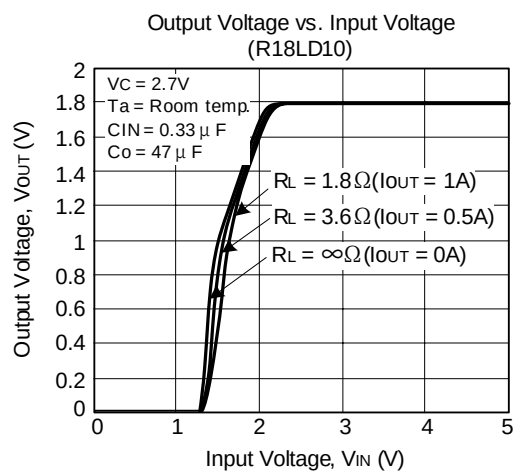
TYPICAL CHARACTERISTICS



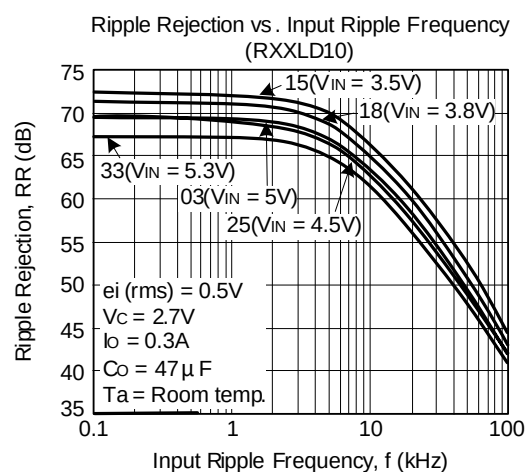
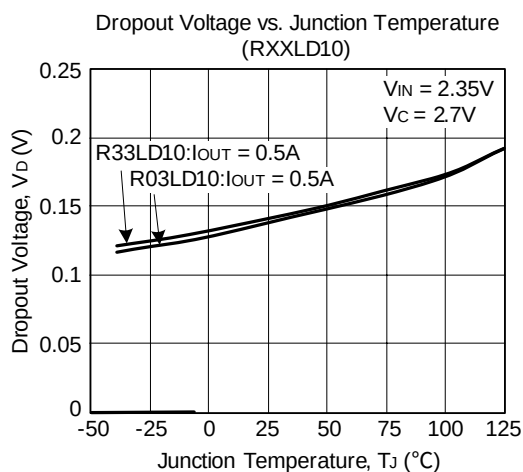
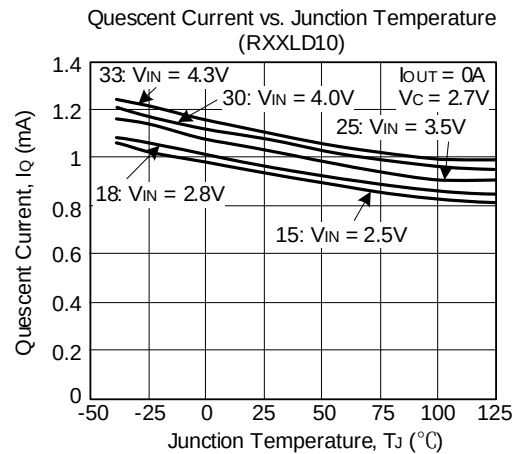
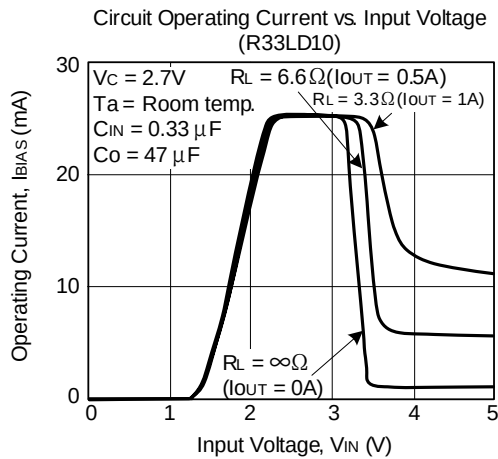
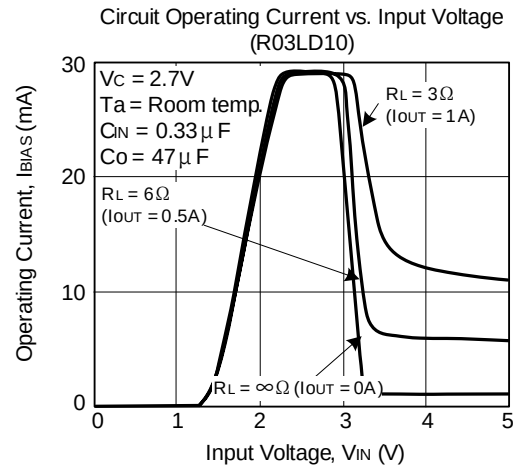
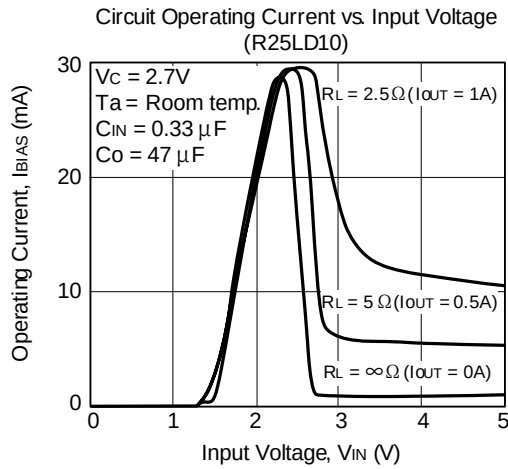
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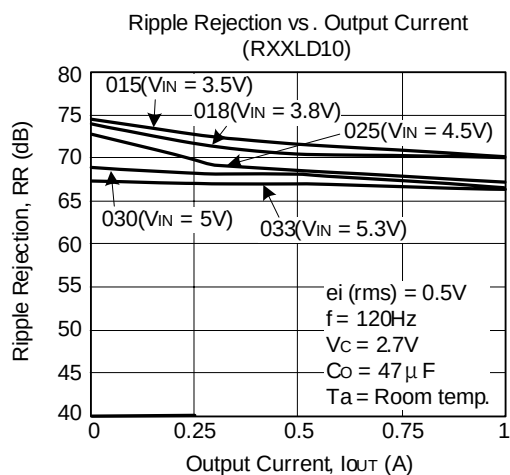
■ TYPICAL CHARACTERISTICS(cont.)



■ TYPICAL CHARACTERISTICS(Cont.)



■ TYPICAL CHARACTERISTICS(Cont.)



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