WR78XX

3-Terminal 1A Positive Voltage Regulator

1. General Description

WR78XX is a three-terminal positive voltage regulator designed for a wide variety of applications including local, on-card regulation.

WR78XX is complete with internal current limiting, thermal shutdown protection and safe-area compensation which make it virtually immune from output overload. If adequate heat sinking is provided, the regulator can deliver output currents of up to 1A.

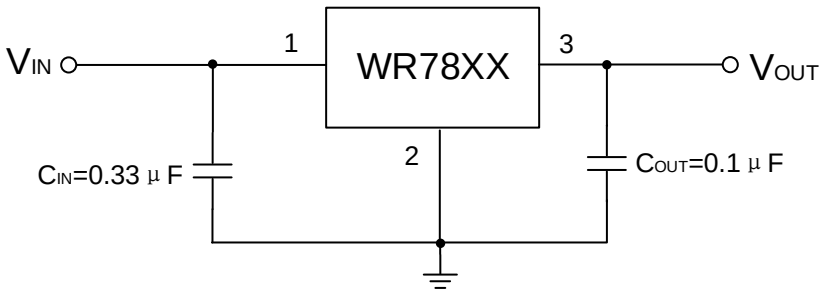
2. Features

- Output Current up to 1A
- Fixed Output Voltage of 5V,6V,8V,9V,10V, 12V, 15V, 18V, 24V
- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection
- Output Transistor Safe-area Protection
- Low Load Regulation
- Package: TO220-3, TO220F-3, TO263-2，TO263-3, TO252-2

3. Applications

- High-efficiency linear regulators
- Post regulation for switching supplies
- Microprocessor power supplies
- Motherboards

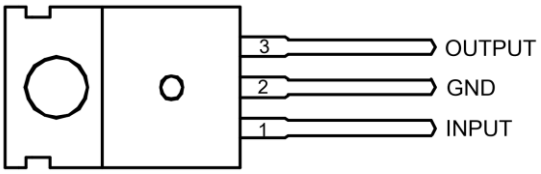
4. Typical Application



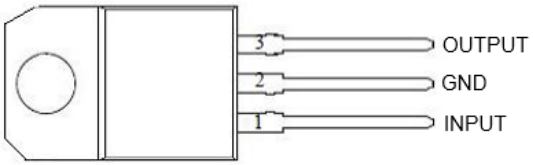
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

5. Pin Configuration

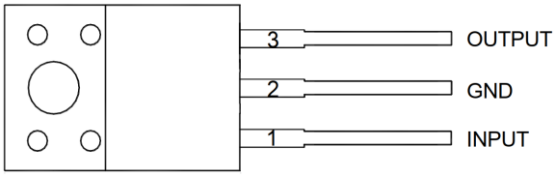
(Top View)



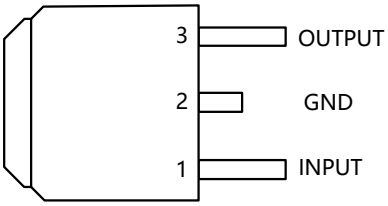
TO220-3(option1)



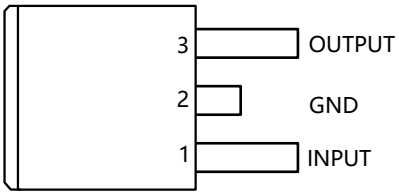
TO220-3(option2)



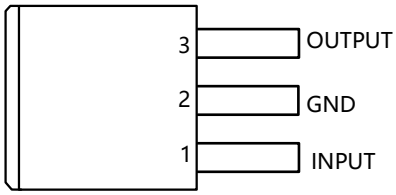
TO220F-3



TO252-2



TO263-2



TO263-3

6. Pin Description

PIN NUMBER	PIN NAME	I/O	PIN FUNCTION
1	INPUT	I	Voltage Input
2	GND	-	Ground
3	OUTPUT	O	Voltage Output

7. Absolute Maximum Ratings

T_A=25℃, unless otherwise noted[1]

SYMBOL	PARAMETER		RATING	UNIT
V_{IN}	Input Voltage		42	V
I_{OUT}	Output Current		2.4	A
P_D	Power Dissipation		Internal Limited	W
$R_{\theta JA}$	Thermal Resistance [2][3] (Junction to Ambient)	TO-220-3	68.08	°C/W
		TO-220F-3	62.73	
		TO-252-2	133.90	
		TO-263	70.12	
$R_{\theta JB}$	Thermal Resistance [2][3] (Junction to Board)	TO-252-2	15.84	°C/W
		TO-263	8.33	
$R_{\theta JC_T}$	Thermal Resistance [2][3] Junction to Case (top)	TO-220-3	23.60	°C/W
		TO-220F-3	23.82	
		TO-252-2	28.09	
		TO-263-2	24.57	
$R_{\theta JC_B}$	Thermal Resistance [2][3] Junction to Case (bottom)	TO-220-3	3.46	°C/W
		TO-220F-3	6.78	
		TO-252-2	6.93	
		TO-263	5.27	

SYMBOL	PARAMETER	RATING	UNIT
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-65 to 150	°C
ESD	HBM	6000	V

NOTE1: Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. These are stress ratings only, which do not imply functional operation of the device at these or any other conditions beyond those indicated under Recommended Operating Conditions. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

NOTE2： Measured according to JEDEC board specification. Detailed description of the board can be found in JESD51−7.

NOTE3： Measured on 2cm x 2cm 2-layer FR4 PCB board, 2 oz copper, no via holes on GND copper.

8. Recommended Operating Conditions

SYMBOL	PARAMETER		MIN	MAX	UNIT
V_{IN}	Input Voltage	WR7805	-	25	V
		WR7806		26	V
		WR7808		28	V
		WR7809		29	V
		WR7810		30	V
		WR7812		32	V
		WR7815		32	V
		WR7818		32	V
		WR7824		35	V
I_{OUT}	Output Current			1	A
T_A	Operating Temperature Range		-40	125	°C

9. Electrical Characteristics

WR7805

(V_{IN}=10V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	4.8	5.0	5.2	V
		V_{IN} = 7.5V to 20V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	4.75	-	5.25	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A		4.0	50	mV
V_{RLINE}	Line Regulation	V_{IN} = 7.5V to 20V		2.0	50	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 7.5V to 20V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		35		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		0.4		mV/°C
PSRR	Ripple Rejection	V_{IN} = 8V to 18V，f=120Hz		65		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7806

(V_{IN}=11V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	5.76	6.0	6.24	V
		V_{IN} = 8.6V to 21V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	5.70	-	6.30	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A			60	mV
V_{RLINE}	Line Regulation	V_{IN} = 8.6V to 21V			60	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 8.6V to 21V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		40		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		0.5		mV/°C
PSRR	Ripple Rejection	V_{IN} = 9.5V to 19.5V, f=120Hz		65		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7808

(V_{IN}=14V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	7.68	8.0	8.32	V
		V_{IN} = 10.6V to 23V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	7.60	-	8.40	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A			80	mV
V_{RLINE}	Line Regulation	V_{IN} = 10.6V to 23V			80	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 10.6V to 23V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		45		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		0.64		mV/°C
PSRR	Ripple Rejection	V_{IN} = 11.5V to 21.5V，f=120Hz		63		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7809

(V_{IN}=15V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	8.64	9.0	9.36	V
		V_{IN} = 11.5V to 23V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	8.55	-	9.45	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A			90	mV
V_{RLINE}	Line Regulation	V_{IN} = 11.5V to 23V			90	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 11.5V to 23V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		50		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		0.72		mV/°C
PSRR	Ripple Rejection	V_{IN} = 12.5V to 22.5V，f=120Hz		63		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7810

(V_{IN}=16V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25℃, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	9.60	10.0	10.40	V
		V_{IN} = 12.5V to 25V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	9.50	-	10.50	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A			100	mV
V_{RLINE}	Line Regulation	V_{IN} = 13V to 25V			100	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 12.6V to 25V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
V_{NO}	Output Noise Voltage	f = 10Hz to 100kHz		50		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		0.8		mV/°C
PSRR	Ripple Rejection	V_{IN} = 13V to 23V，f=120Hz		62		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7812

(V_{IN}=19V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	11.52	12.0	12.48	V
		V_{IN} = 14.5V to 27V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	11.40	-	12.60	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A			120	mV
V_{RLINE}	Line Regulation	V_{IN} = 14.5V to 30V			120	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 14.5V to 30V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		65		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		0.96		mV/°C
PSRR	Ripple Rejection	V_{IN} = 15V to 25V，f=120Hz		61		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7815

(V_{IN}=23V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	14.40	15.0	15.60	V
		V_{IN} = 17.5V to 30V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	14.25	-	15.75	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A		40	140	mV
V_{RLINE}	Line Regulation	V_{IN} = 18.5V to 30V		20	140	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 17.5V to 30V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		75		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		1.2		mV/°C
PSRR	Ripple Rejection	V_{IN} = 18.5V to 28.5V, f=120Hz		60		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7818

(V_{IN}=27V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	17.28	18.0	18.72	V
		V_{IN} = 21V to 33V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	17.10	-	18.90	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A		85	180	mV
V_{RLINE}	Line Regulation	V_{IN} = 21V to 33V		45	180	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 21V to 33V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		95		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		1.5		mV/°C
PSRR	Ripple Rejection	V_{IN} = 22V to 32V, f=120Hz		58		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

WR7824

(V_{IN}=33V, I_{OUT}=0.5A, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_A=25°C, unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP.	MAX	UNIT
V_{OUT}	Output Voltage	I_{OUT} = 5mA to 1A	23.04	24.0	24.96	V
		V_{IN} = 27V to 38V, I_{OUT} = 5mA to 1A, $P_D \leq$ 15W [4]	22.80	-	25.20	V
V_{DROP}	Dropout Voltage			2.0		V
V_{RLOAD}	Load Regulation	I_{OUT} = 5mA to 1A			240	mV
V_{RLINE}	Line Regulation	V_{IN} = 27V to 38V			240	mV
I_Q	Quiescent Current	I_{OUT} = 5mA to 1A		3.2	7	mA
ΔI_Q	Quiescent Current Change	V_{IN} = 28V to 38V		0.3	0.9	mA
		I_{OUT} = 5mA to 1A		0.08	0.5	mA
N_O	Output Noise Voltage	f = 10Hz to 100kHz		160		μV
$\Delta V_{OUT}/\Delta T$	Output Voltage Temperature Coefficient	I_{OUT} = 5mA		1.9		mV/°C
PSRR	Ripple Rejection	V_{IN} = 28V to 38V, f=120Hz		55		dB
I_{PK}	Peak Output Current			2.4		A
I_{SC} [5]	Short Circuit Current	V_{IN} = 35V		0.2		A

NOTE4: If the power consumption of the package is exceeded, it is necessary to add a heat sink, otherwise it will be overheated and protected.

NOTE5: Use a multimeter between OUT and GND for short-circuit current testing. The Short Circuit Current may change over time.

10. Typical Performance Characteristics

(T_A=25℃, C_{IN}=0.33μF, C_{OUT}=0.1μF, unless otherwise noted)

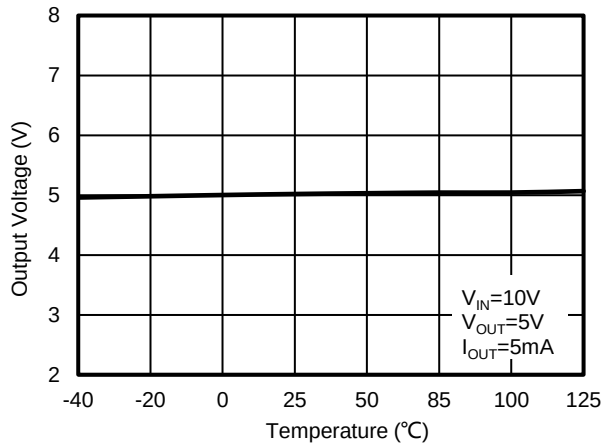


Figure 1. WR7805-NE2R
Output Voltage vs. Ambient Temperature

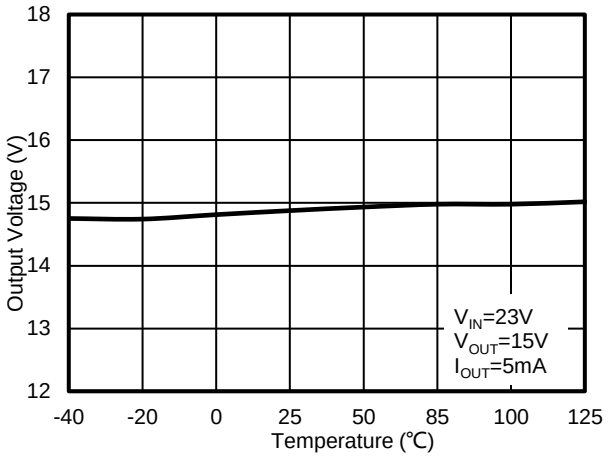


Figure 2. WR7815-NA3T
Output Voltage vs. Ambient Temperature

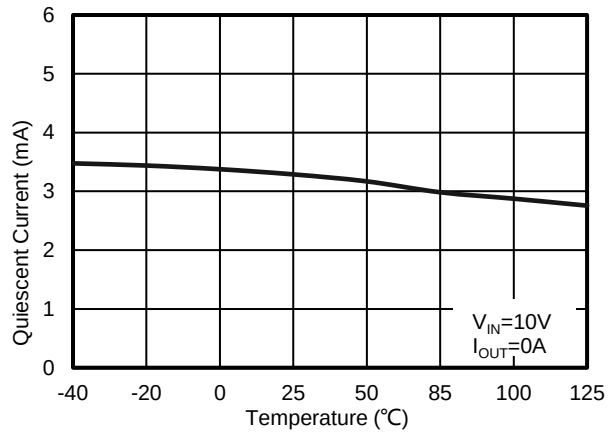


Figure 3. WR7805-NE2R
Quiescent Current vs. Ambient Temperature

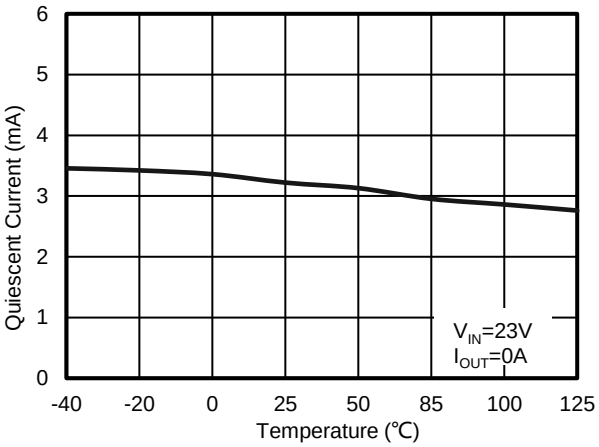


Figure 4. WR7815-NA3T
Quiescent Current vs. Ambient Temperature

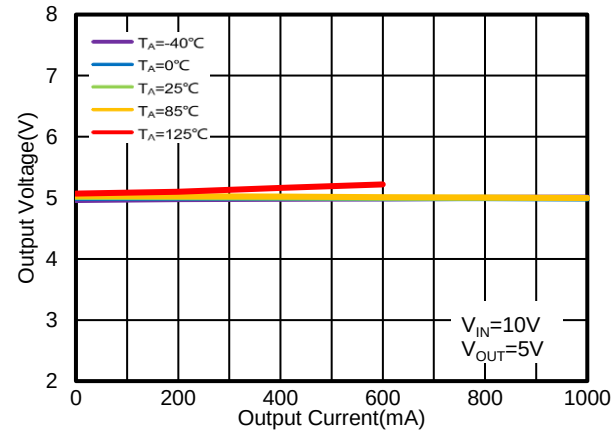


Figure 5. WR7805-NE2R
Load Regulation vs. I_{OUT} & Ambient Temperature

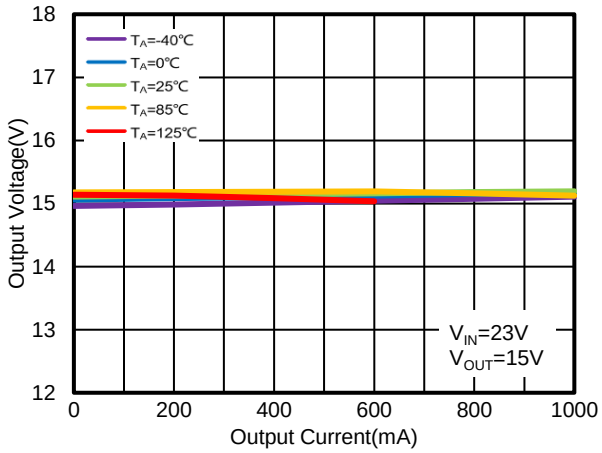


Figure 6. WR7815-NA3T
Load Regulation vs. I_{OUT} & Ambient Temperature

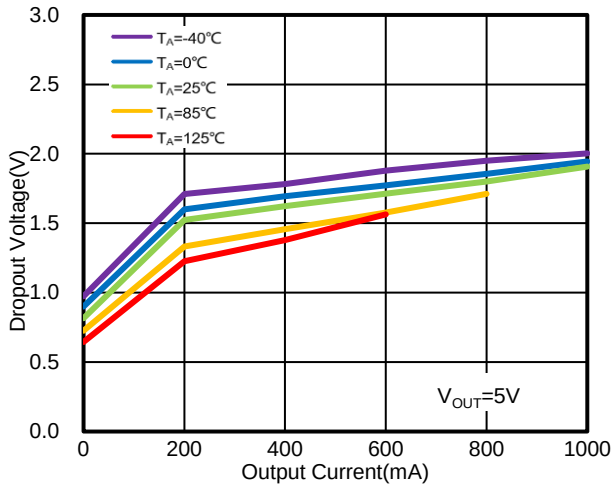


Figure 7. WR7805-NE2R
Dropout Voltage vs. I_{OUT} & Ambient Temperature

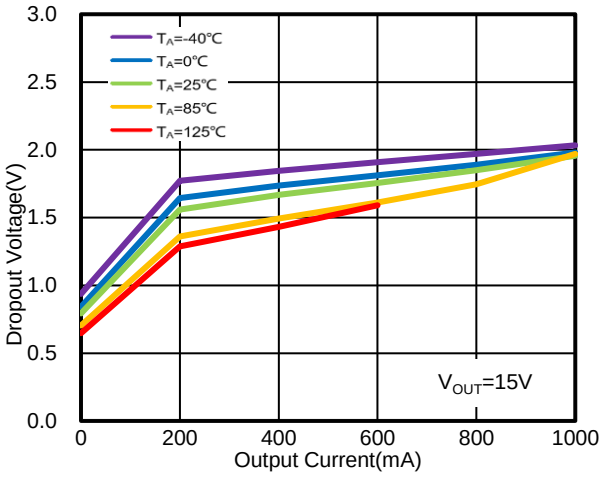


Figure 8. WR7815-NA3T
Dropout Voltage vs. I_{OUT} & Ambient Temperature

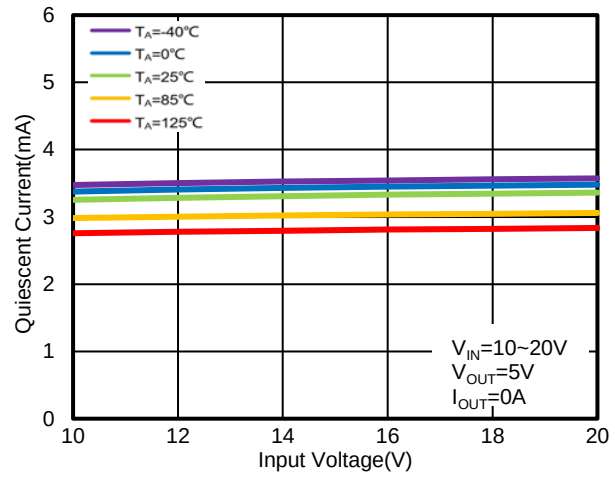


Figure 9. WR7805-NE2R
Quiescent Current vs. V_{IN} & Ambient Temperature

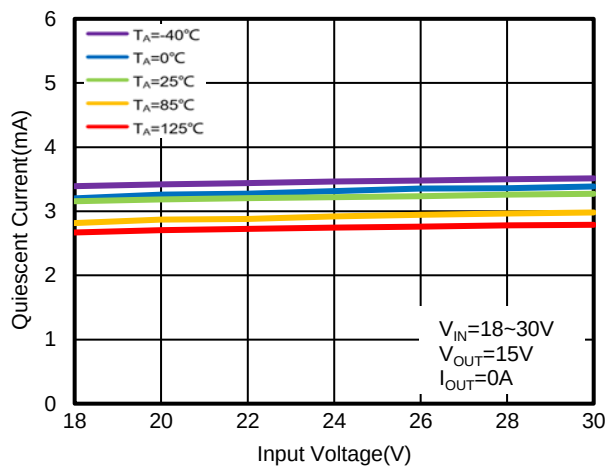


Figure 10. WR7815-NA3T
Quiescent Current vs. V_{IN} & Ambient Temperature

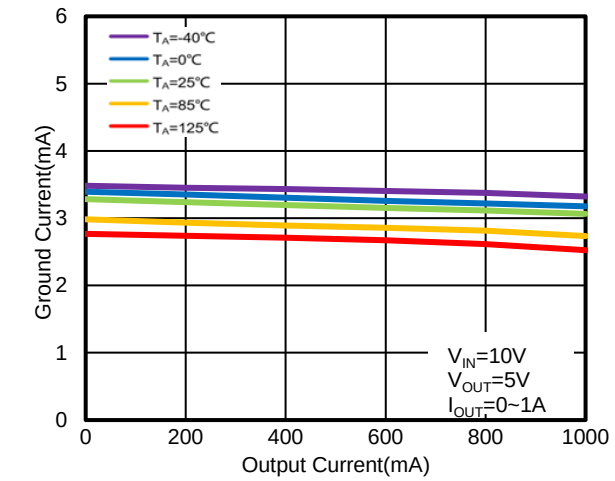


Figure 11. WR7805-NE2R
Ground Current vs. I_{OUT} & Ambient Temperature

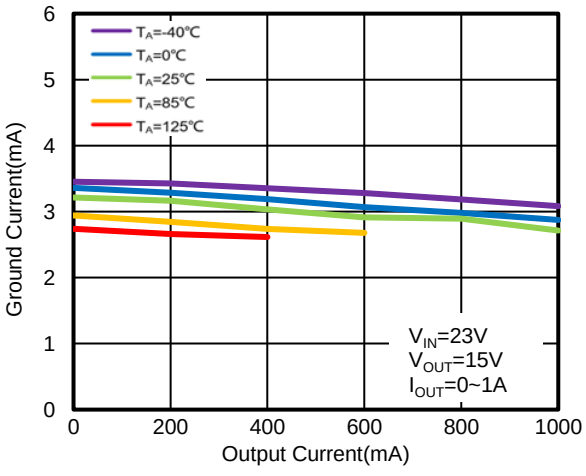


Figure 12. WR7815-NA3T
Ground Current vs. I_{OUT} & Ambient Temperature

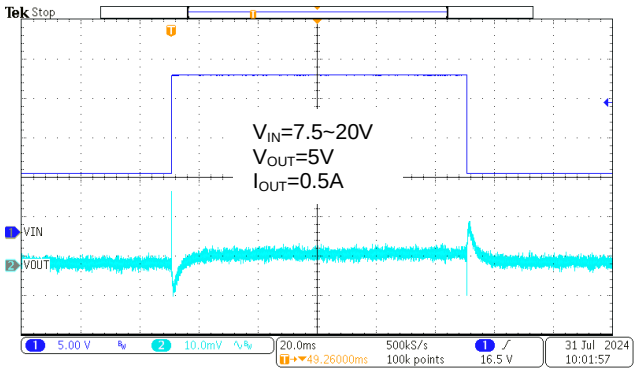


Figure 13. WR7805-NA3T
Line Transient

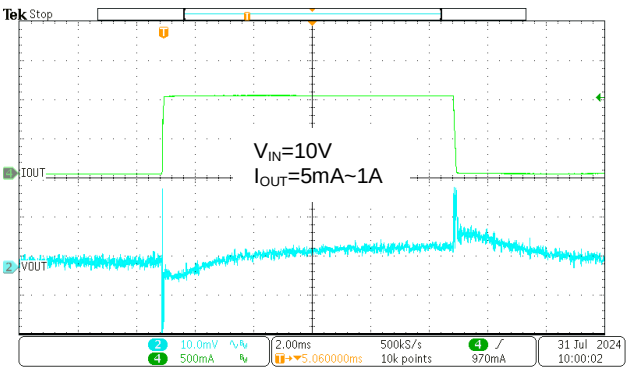


Figure 14. WR7805-NA3T
Load Transient

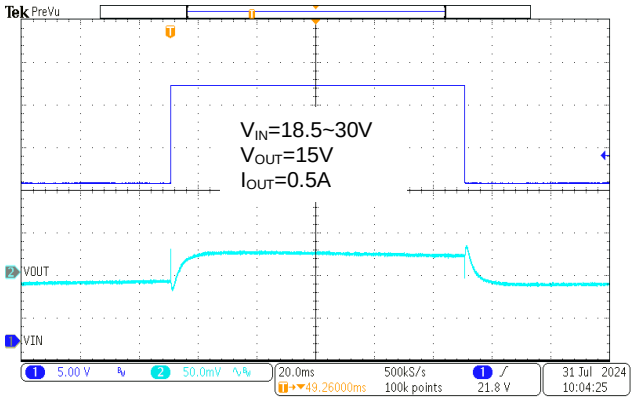


Figure 15. WR7815-NA3T
Line Transient

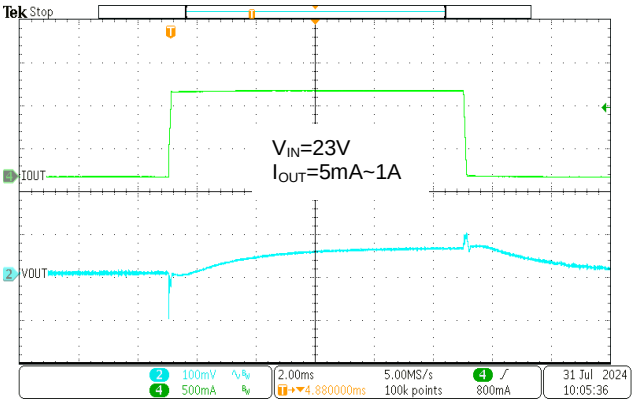


Figure 16. WR7815-NA3T
Load Transient

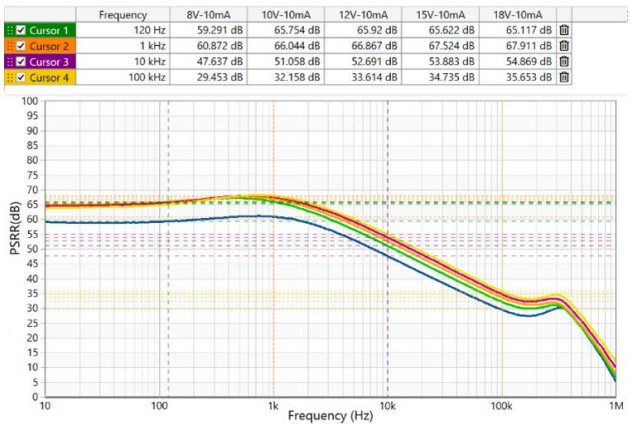


Figure 17. WR7805-NA3T
Power Supply Rejection Ratio vs. Frequency (I_{OUT}=10mA)

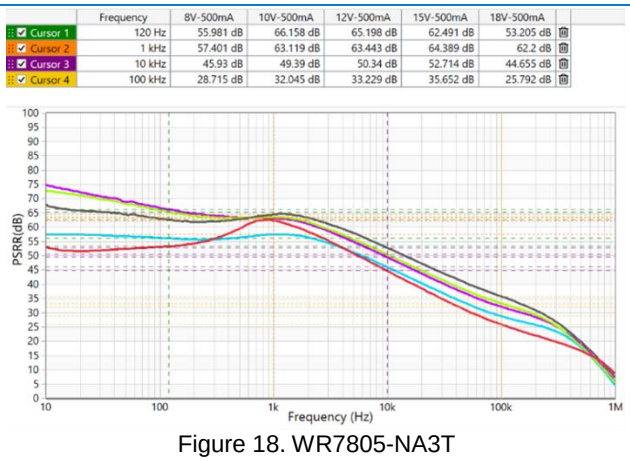


Figure 18. WR7805-NA3T
Power Supply Rejection Ratio vs. Frequency
(I_{OUT}=500mA)

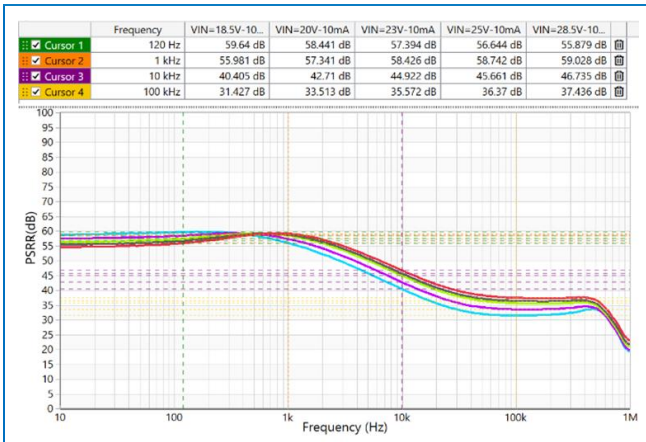


Figure 19. WR7815-NA3T
Power Supply Rejection Ratio vs. Frequency (I_{OUT}=10mA)

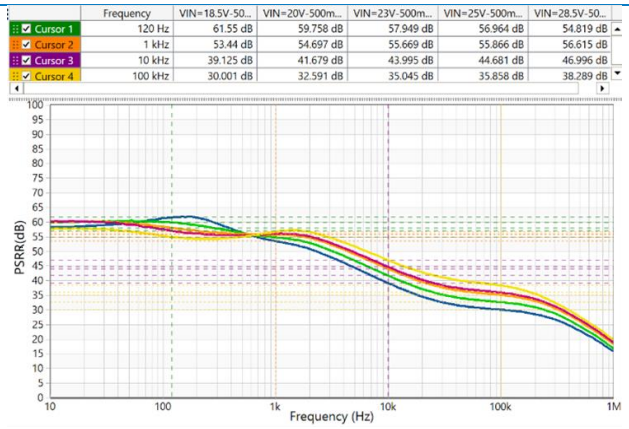
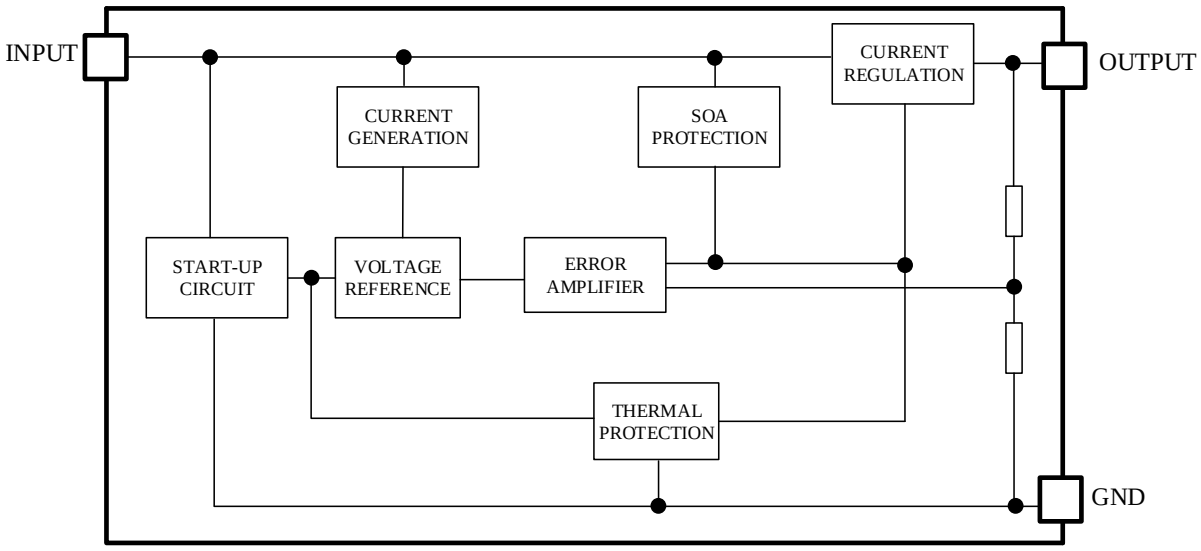


Figure 20. WR7815-NA3T
Power Supply Rejection Ratio vs. Frequency
(I_{OUT}=500mA)

11. Block Diagram



12. Naming Conventions

WR AA BB-CCC D

WR: WAYON Regulator

A A: 78-Product Name

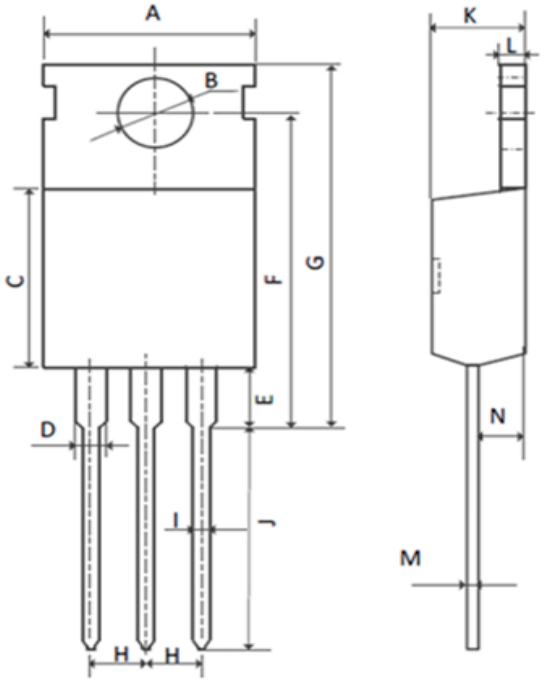
B B: 05-Output Voltage, 5V
06-Output Voltage, 6V
08-Output Voltage, 8V
09-Output Voltage, 9V
10-Output Voltage, 10V
12-Output Voltage, 12V
15-Output Voltage, 15V
18-Output Voltage, 18V
24-Output Voltage, 24V

CCC: NA3-Package, TO220-3
NL3-Package, TO220F-3
NE2-Package, TO263-2
NE3-Package, TO263-3
T20-Package, TO252-2

D: R-Reel & T-Tube

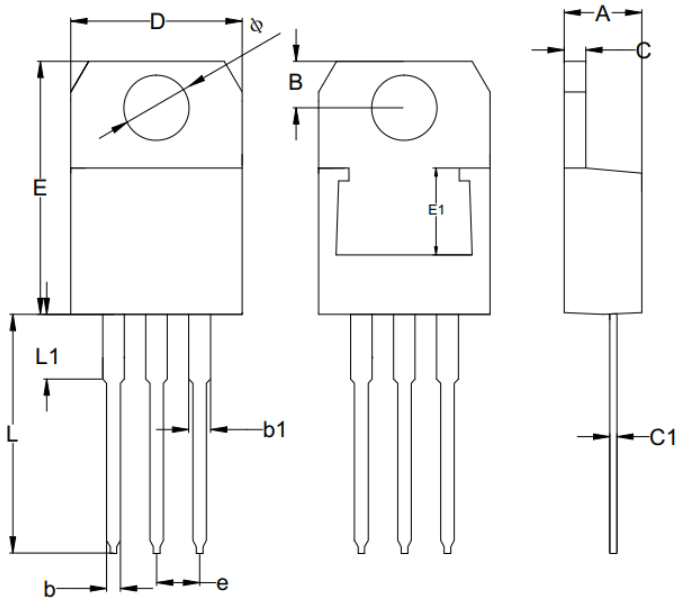
13. Package Information

TO220-3(Option 1)



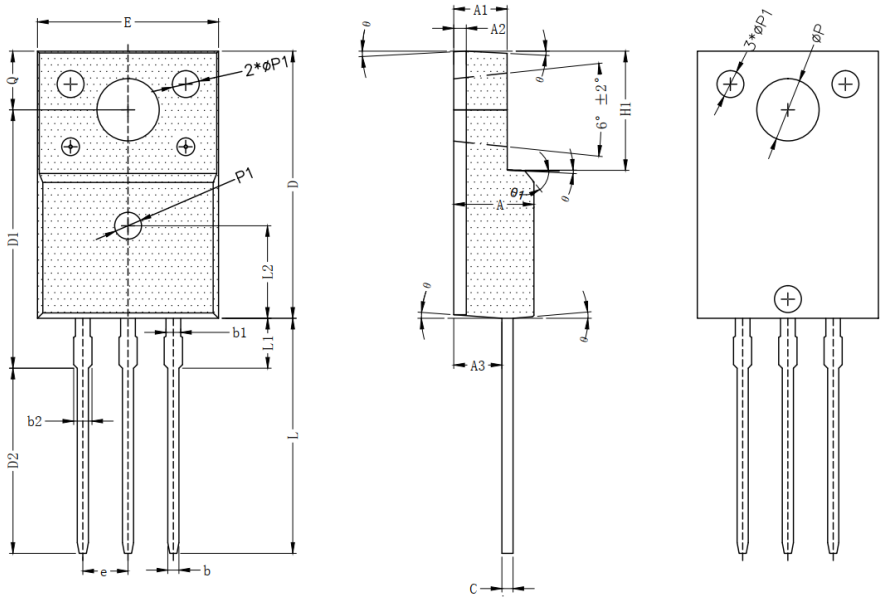
SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	9.70	10.30
B	3.40	3.80
C	8.80	9.40
D	1.15	1.47
E	2.60	3.50
F	15.10	16.70
G	19.55MAX	
H	2.54REF	
I	0.65	0.95
J	9.35	11.00
K	4.30	4.77
L	1.15	1.45
M	0.35	0.65
N	2.20	2.60

TO220-3(Option 2)



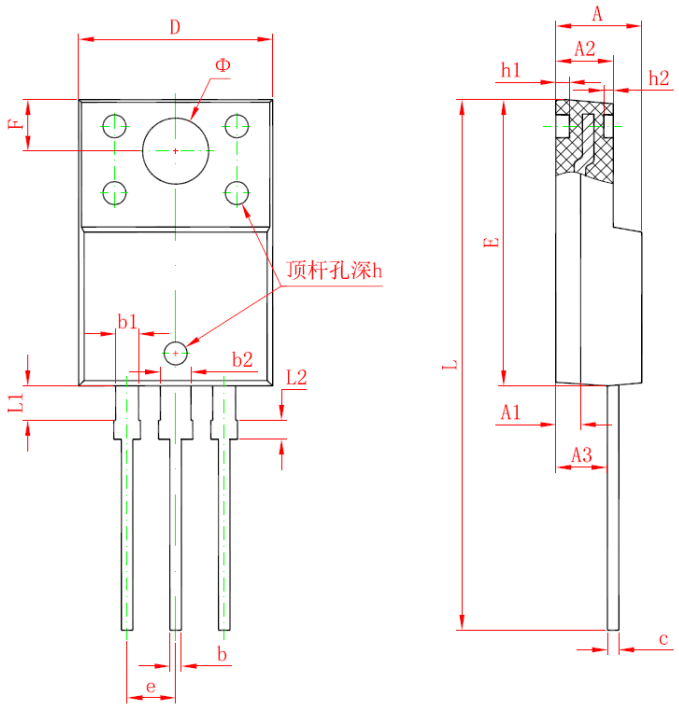
SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	4.450	4.650
B	2.650	2.850
b	0.710	0.910
b1	1.170	1.370
C	1.170	1.370
C1	0.310	0.530
D	10.000	10.400
E	15.100	15.500
E1	5.040TYP	
e	2.540TYP	
L	13.300	13.700
L1	3.600	4.000
ϕ	3.750	3.950

TO220F-3(Option 1)



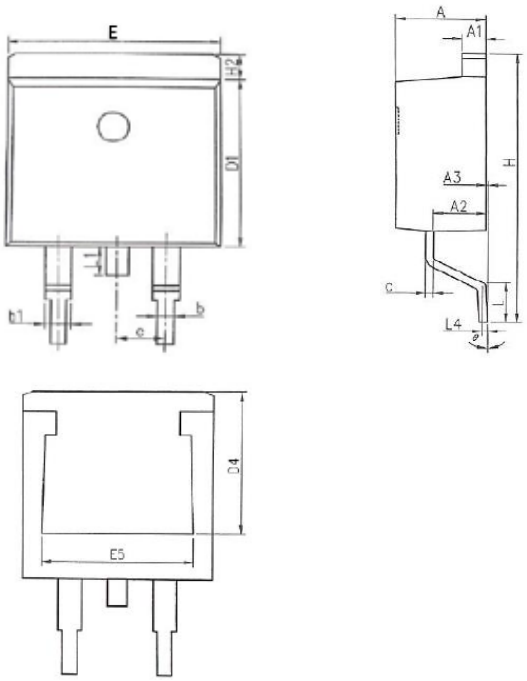
SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	4.50	4.83
A1	2.34	2.74
A2	0.70REF	
A3	2.56	2.93
b	0.70	0.90
b1	1.18	1.38
b2	-	1.47
c	0.45	0.60
D	15.67	16.07
D1	15.55	15.95
D2	9.60	10.00
E	9.96	10.36
e	2.54BSC	
H1	6.48	6.88
L	12.68	13.28
L1	3.10	3.30
L2	6.50REF	
ϕP	3.08	3.28
ΦP1	1.40	1.60
Q	3.20	3.40
θ	1°	7°
θ1	42°	48°

TO220F-3(Option 2)



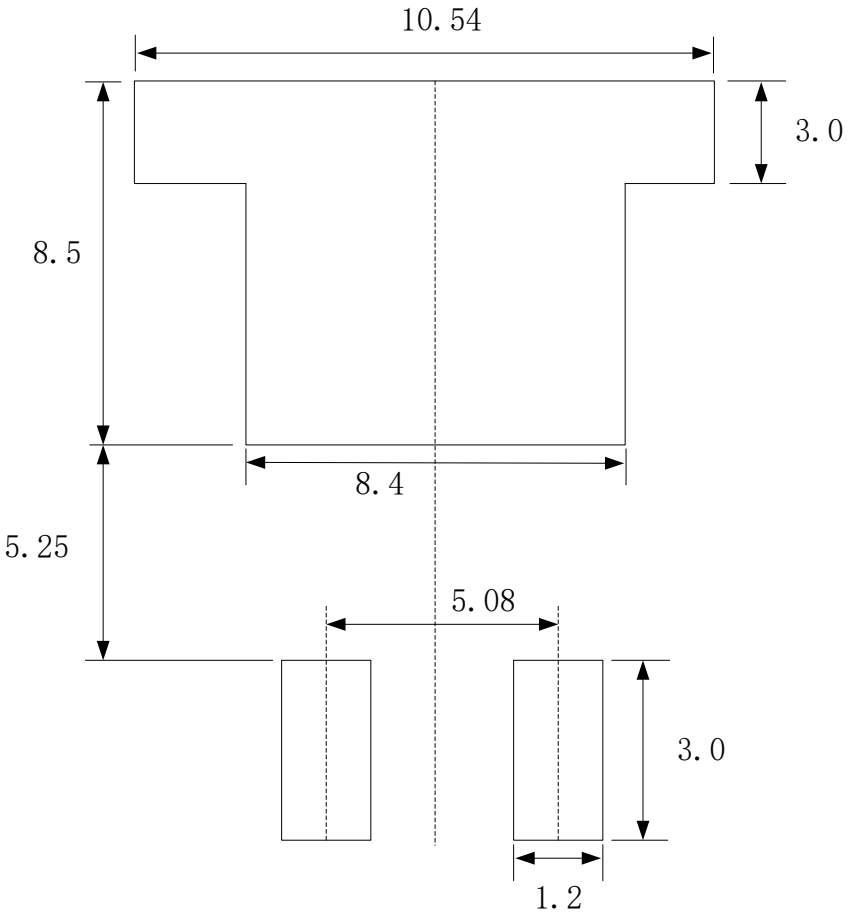
SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	4.300	4.700
A1	1.300REF	
A2	2.800	3.200
A3	2.500	2.900
b	0.500	0.750
b1	1.100	1.350
b2	1.500	1.760
c	0.500	0.750
D	9.960	10.360
E	14.800	15.200
e	2.540TYP	
F	2.700REF	
Φ	3.500REF	
h	0.000	0.300
h1	0.800REF	
h2	0.500REF	
L	28.000	28.400
L1	1.700	1.900
L2	0.900	1.100

TO263-2



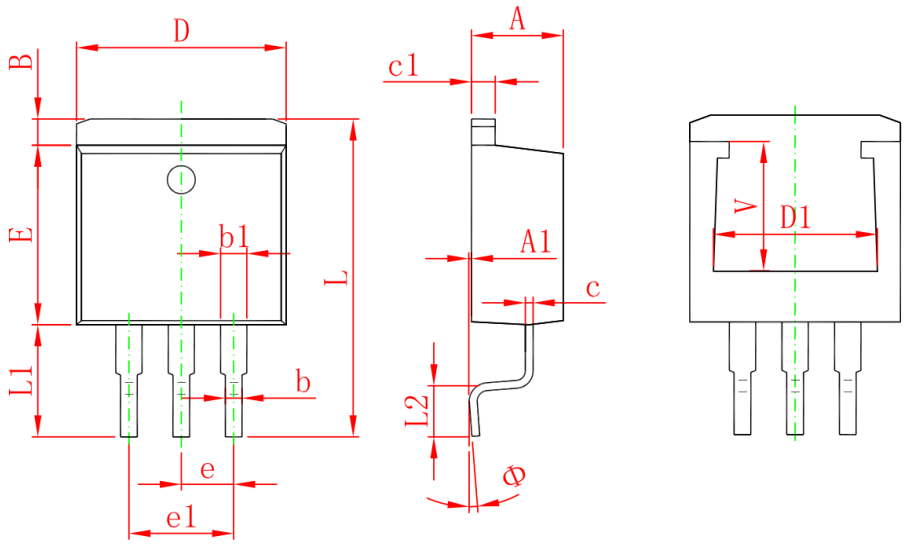
SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	4.37	4.89
A1	1.17	1.42
A2	2.20	2.90
A3	0.00	0.25
b	0.70	0.96
b1	1.17	1.47
c	0.28	0.60
D1	8.45	9.30
D4	6.60	-
E	9.68	10.40
E5	7.06	-
e	2.54BSC	
H	14.70	15.70
H2	1.00	1.47
L	2.00	2.80
L1	-	1.75
L4	0.254BSC	
θ	0°	9°

Recommended Pad Layout: TO263-2



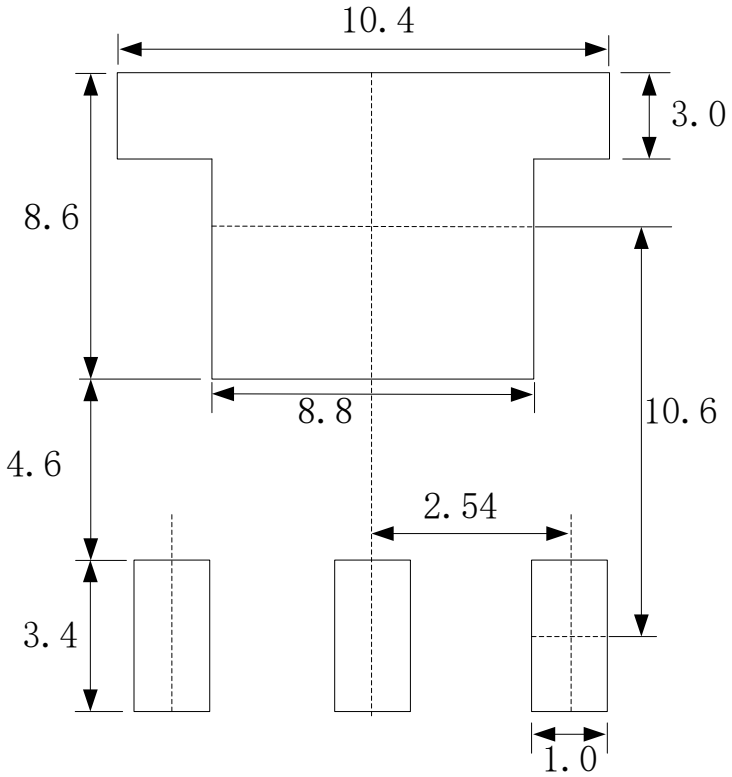
NOTE: Dimensions In Millimeters

TO263-3



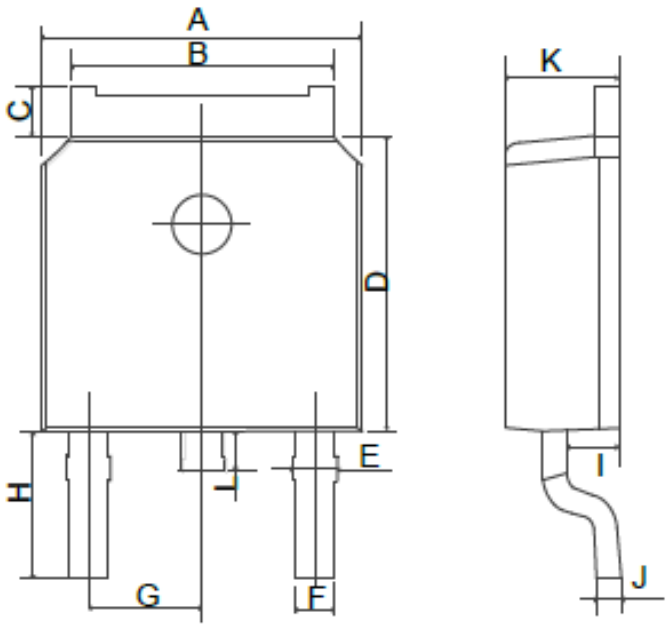
SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	4.470	4.670
A1	0.000	0.150
B	1.120	1.420
b	0.710	0.910
b1	1.170	1.370
c	0.310	0.530
c1	1.170	1.370
D	10.010	10.310
E	8.500	8.900
e	2.540TYP.	
e1	4.980	5.180
L	14.940	15.500
L1	4.950	5.450
L2	2.340	2.740
Φ	0°	8°
D1	7.510	8.510
V	4.800	5.800

Recommended Pad Layout: TO263-3



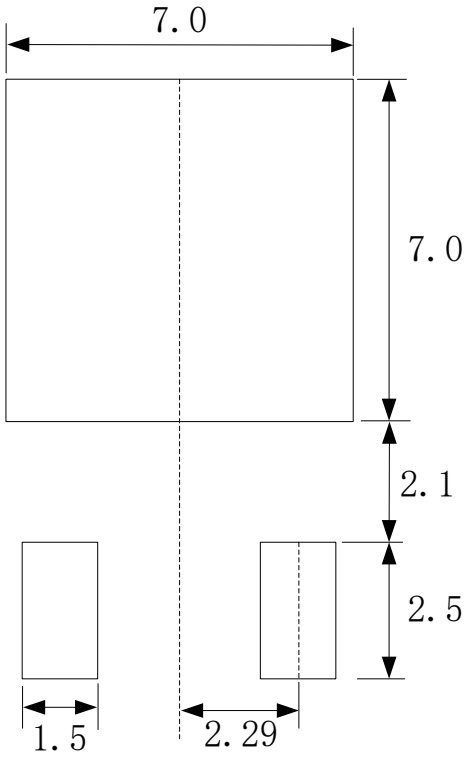
NOTE: Dimensions In Millimeters

TO252-2



SYMBOL	DIMENSIONS IN MILLIMETERS	
	MIN	MAX
A	6.40	6.80
B	5.13	5.50
C	0.88	1.28
D	5.90	6.22
E	0.68	1.13
F	0.66	0.91
G	2.29REF	
H	2.90REF	
I	0.85	1.26
J	0.51REF	
K	2.10	2.50
L	0.40	1.00

Recommended Pad Layout: TO252-2



NOTE: Dimensions In Millimeters

14. Ordering Information

PART NUMBER	OUTPUT CURRENT	PACKAGE	PACKING QUANTITY	MARKING*
WR7805-NA3T	1A	TO220-3	50/Tube	WR7805 XXXX
WR7805-NL3T	1A	TO220F-3	50/Tube	WR7805 XXXX
WR7805-NE2R	1A	TO263-2	800/Reel	WR7805 XXXX
WR7805-T20R	1A	TO252-2	2.5k/Reel	WR7805 XXXX
WR7806-NA3T	1A	TO220-3	50/Tube	WR7806 XXXX
WR7806-NL3T	1A	TO220F-3	50/Tube	WR7806 XXXX
WR7806-NE2R	1A	TO263-2	800/Reel	WR7806 XXXX
WR7806-T20R	1A	TO252-2	2.5k/Reel	WR7806 XXXX
WR7808-NA3T	1A	TO220-3	50/Tube	WR7808 XXXX
WR7808-NL3T	1A	TO220F-3	50/Tube	WR7808 XXXX
WR7808-NE2R	1A	TO263-2	800/Reel	WR7808 XXXX
WR7808-T20R	1A	TO252-2	2.5k/Reel	WR7808 XXXX
WR7809-NA3T	1A	TO220-3	50/Tube	WR7809 XXXX
WR7809-NL3T	1A	TO220F-3	50/Tube	WR7809 XXXX
WR7809-NE2R	1A	TO263-2	800/Reel	WR7809 XXXX
WR7809-T20R	1A	TO252-2	2.5k/Reel	WR7809 XXXX
WR7810-NA3T	1A	TO220-3	50/Tube	WR7810 XXXX
WR7810-NL3T	1A	TO220F-3	50/Tube	WR7810 XXXX
WR7810-NE2R	1A	TO263-2	800/Reel	WR7810 XXXX
WR7810-NE3R	1A	TO263-3	800/Reel	WR7810 XXXX

PART NUMBER	OUTPUT CURRENT	PACKAGE	PACKING QUANTITY	MARKING*
WR7810-T20R	1A	TO252-2	2.5k/Reel	WR7810 XXXX
WR7812-NA3T	1A	TO220-3	50/Tube	WR7812 XXXX
WR7812-NL3T	1A	TO220F-3	50/Tube	WR7812 XXXX
WR7812-NE2R	1A	TO263-2	800/Reel	WR7812 XXXX
WR7812-T20R	1A	TO252-2	2.5k/Reel	WR7812 XXXX
WR7815-NA3T	1A	TO220-3	50/Tube	WR7815 XXXX
WR7815-NL3T	1A	TO220F-3	50/Tube	WR7815 XXXX
WR7815-NE2R	1A	TO263-2	800/Reel	WR7815 XXXX
WR7815-T20R	1A	TO252-2	2.5k/Reel	WR7815 XXXX
WR7818-NA3T	1A	TO220-3	50/Tube	WR7818 XXXX
WR7818-NL3T	1A	TO220F-3	50/Tube	WR7818 XXXX
WR7818-NE2R	1A	TO263-2	800/Reel	WR7818 XXXX
WR7818-T20R	1A	TO252-2	2.5k/Reel	WR7818 XXXX
WR7824-NA3T	1A	TO220-3	50/Tube	WR7824 XXXX
WR7824-NL3T	1A	TO220F-3	50/Tube	WR7824 XXXX
WR7824-NE2R	1A	TO263-2	800/Reel	WR7824 XXXX
WR7824-T20R	1A	TO252-2	2.5k/Reel	WR7824 XXXX

* XXXX is variable.

Contact Information

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WAYON website: http://www.way-on.com
For additional information, please contact your local Sales Representative.
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Product Specification Statement

1.The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

2.The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. WAYON shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and WAYON assumes no responsibility for the application of the product.

3.WAYON strives to provide accurate and up-to-date information to the best of our ability. However, due to technical, human, or other reasons, WAYON cannot guarantee that the information provided in the product specification is entirely accurate and error-free. WAYON shall not be held responsible for any losses or damages resulting from the use or reliance on any information in these product specifications. WAYON reserves the right to revise or update the product specification and the products at any time without prior notice, and the user's continued use of the product specification is considered an acceptance of these revisions and updates. Prior to purchasing and using the product, users should verify the above information with WAYON to ensure that the product specification is the most current, effective, and complete. If users are particularly concerned about product parameters, please consult WAYON in detail or request relevant product test reports. Any data not explicitly mentioned in the product specification shall be subject to separate agreement.

4.Users are advised to pay attention to the parameter limit values specified in the product specification and maintain a certain margin in design or application to ensure that the product does not exceed the parameter limit values defined in the product specification. This precaution should be taken to avoid exceeding one or more of the limit values, which may result in permanent irreversible damage to the product, ultimately affecting the quality and reliability of the system or equipment.

5.The design of the product is intended to meet civilian needs and is not guaranteed for use in harsh environments or precision equipment. It is not recommended for use in systems or equipment such as medical devices, aircraft, nuclear power, and similar systems, where failures in these systems or equipment could reasonably be expected to result in personal injury. WAYON shall assume no responsibility for any consequences resulting from such usage.

6.Users should also comply with relevant laws, regulations, policies, and standards when using the product specification. Users are responsible for the risks and liabilities arising from the use of the product specification and must ensure that it is not used for illegal purposes. Additionally, users should respect the intellectual property rights related to the product specification and refrain from infringing upon any third-party legal rights. WAYON shall assume no responsibility for any disputes or controversies arising from the above-mentioned issues in any form.