

Rochester Electronics Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All recreations are done with the approval of the OCM.

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceed the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-35835
 - Class Q Military
 - Class V Space Level
- Qualified Suppliers List of Distributors (QSLD)
- Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OEM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

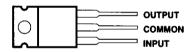
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- 3-Terminal Regulators
- Output Current Up to 500 mA
- No External Components
- Internal Thermal Overload Protection
- High Power Dissipation Capability
- Internal Short-Circuit Current Limiting
- Output Transistor Safe-Area Compensation
- Direct Replacements for Fairchild μΑ78Μ00 Series

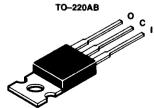
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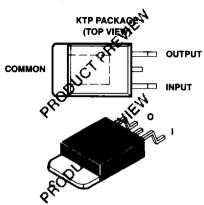
This series of fixed-voltage monolithic integrated-circuit voltage regulators is designed for a wide range of applications. These applications include on-card regulation for elimination of noise and distribution problems associated with single-point regulation. Each of these regulators can deliver up to 500 mA of output current. The internal current limiting and thermal shutdown features of these regulators make them essentially immune to overload. In addition to use as fixed-voltage regulators, these devices can be used with external components to obtain adjustable output voltages and currents and also as the power pass element in precision regulators.





The common terminal is in electrical contact with the mounting base.





AVAILABLE OPTIONS

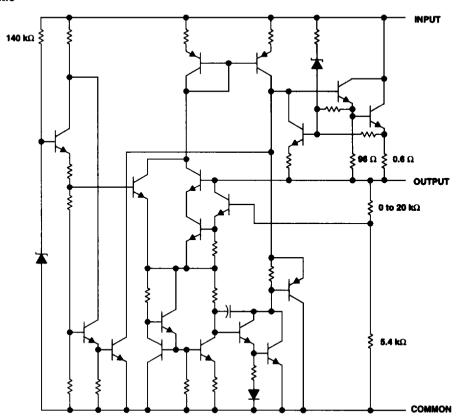
	W = (n a m)	PACKAGE	D DEVICES	CHIP
TA	VO(nom)	HEAT-SINK MOUNTED (KC)	HEAT-SINK MOUNTED†	FORM (Y)
	5	μΑ78M05CKC	µА78М05ССТ	μΑ78M05Y
	6	μ Α78M 06CKC	ДА78МОСКТ	μ Α78Μ06 Υ
	8	μΑ78M08CKC	HAZBANBOK C	μ Α78Μ08 Υ
	9	μ Α78Μ09 CKC	ZeMescikTP	μ Α78Μ09 Υ
0°C to 125°C	10	μ Α78M 10CKC	WAZEN (OCKTP	μ Α78M1 0Υ
	12	μ Α78M 12CKC	M BM12CKTP	μ Α 78 Μ 12Υ
	15	μ Α78M15CKC	A78M15CKTP	μ Α78M1 5Υ
	20	μ Α78M20CKC	μΑ78M20CKTP	μ Α78M2 0Υ
	24	μΑ78M24CKC	μΑ78M24CKTP	μ Α78M24 Υ

† The KTP package is only available in tape and reel.



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schematic



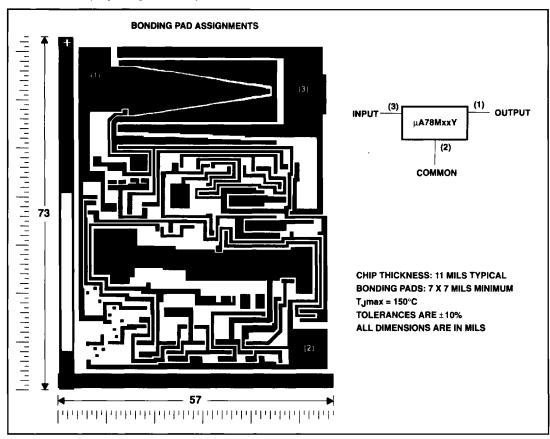
Resistor values shown are nominal.



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μΑ78MxxY chip Information

This chip, when properly assembled, displays characteristics similar to the μ A78MxxC. Thermal compression or ultrasonic bonding can be used on the doped aluminum bonding pads. The chip can be mounted with conductive epoxy or a gold-silicon preform.



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absolute maximum ratings over operating temperature range (unless otherwise noted)†

		µ А78М хх	UNIT
	μΑ78Μ20, μΑ78Μ24	-40	V
Input voltage, V _I	All others	35	l
Continuous total power dissipation (see Note	1)	See Dissipation Rating Tables	1 and 2
Operating free-air (TA), case (TC), or virtual ju	nction (TJ) temperature range	0 to 150	ů
Storage temperature range, Tatg		-65 to 150	.c
Lead temperature 1.6 mm (1/16 inch) from car	se for 10 seconds	260	°C.

[†] Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "recommended operating conditions" is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

NOTE 1: To avoid exceeding the design maximum virtual junction temperature, these ratings should not be exceeded. Due to variations in individual device electrical characteristics and thermal resistance, the built-in thermal overload protection may be activated at power levels slightly above or below the rated dissipation.

DISSIPATION RATING TABLE 1 - FREE-AIR TEMPERATURE

PACKAGE	T _A ≤ 25°C POWER RATING	DERATING FACTOR ABOVE T _A = 25°C	T _A = 70°C POWER RATING
KC	2000 mW	16 mW/°C	1280 mW
KTP†			

[†] The KTP package is product preview only and derating information is not yet available.

DISSIPATION RATING TABLE 2 - CASE TEMPERATURE

PACKAGE	T _C ≤ 50°C POWER RATING	DERATING FACTOR ABOVE T _C = 50°C	T _C = 125°C POWER RATING
КС	20 W	200 mW/°C	5 W
ктр†			

[†] The KTP package is product preview only and derating information is not yet available.

recommended operating conditions

		MIN	MAX	UNIT
	μΑ78M05	7	25	
	μ Α78M 06	8	25	
	μ Α78M 08	10.5	25	
nput voltage, V _I	μ Α78M 09	11.5	26	
	μ Α78M 10	12.5	28	٧
	μ Α78M 12	14.5	30	
	μ Α78M 15	17.5	30	
	μ Α78M2 0	23	35	
	μ Α78M24	27	38	
Output current, IO			500	mA
Operating virtual junction temperature, TJ		0	125	ç

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electrical characteristics at specified virtual junction temperature, $V_I = 10 \text{ V}$, $I_O = 350 \text{ mA}$, $T_{cl} = 25^{\circ}\text{C}$ (unless otherwise noted)

		TEST CONDITIONS			μ Α78M05C		
PARAMETER	TEST CO				MAX	UNIT	
O. d			4.8	5	5.2	v	
Output voltage‡	$V_1 = 7 \text{ V to } 20 \text{ V},$	T _J = 0°C to 125°C	4.75		5.25	V	
		V _I = 7 V to 25 V		3	100		
Input voltage regulation	I _O = 200 mA	V _I = 8 V to 20 V				mV	
•		V _I = 8 V to 25 V		1	50		
RIDDIA FAIACIION	V _I = 8 V to 18 V,	I _O = 100 mA, T _J = 0°C to 125°C	62			dB	
	f = 120 Hz	I _O = 300 mA	62	80			
Outdoor de collège que se social décon	IO = 5 mA to 500 mA		20	100	mV		
Output voltage regulation	IO = 5 mA to 200 mA			10	50	mv	
Temperature coefficient of output voltage	I _O = 5 mA	T _J = 0°C to 125°C		-1		mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz			40	200	μV	
Dropout voltage				2	2.5	٧	
Bias current				4.5	6	mA	
Bias current change	I _O = 200 mA, T _J = 0°C to 125°C	V _I = 8 V to 25 V,			0.8	mA	
•	IO = 5 mA to 350 mA	T _J = 0°C to 125°C			0.5		
Short-circuit output current	V _I = 35 V			300		mA	
Peak output current			Ī	0.7		Α	

[†] All characteristics are measured with a 0.33-µF capacitor across the input and a 0.1-µF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, $V_1 = 11 \text{ V}$, $I_0 = 350 \text{ mA}$, $T_J = 25^{\circ}\text{C}$ (unless otherwise noted)

BARANCTER	TEST CONDITIONST			μ	478M06	C	
PARAMETER				MIN	TYP	MAX	UNIT
0.40.4				5.75	6	6.25	v
Output voltage‡	IO = 5 mA to 350 mA, V _I = 8 V to 21 V, T _J = 0°C to 125°C					6.3	
ttt	l- 000 m 4	V _I = 8 V to 25 V		5	100	m۷	
Input voltage regulation	IO = 200 mA		V _I = 9 V to 25 V	1.	1.5	50	1117
Ripple rejection	V ₁ = 9 V to 19 V, f = 120 Hz	f = 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	59	59		dB
		I _O = 300 mA	59	80		1	
O the decide of the control of the c	IO = 5 mA to 500 mA				20	120	m۷
Output voltage regulation	IO = 5 mA to 200 mA				10	60	mv
Temperature coefficient of output voltage	l _O = 5 mA,	T _J = 0°C to 125	°C		-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz		-		45		μV
Dropout voltage					2		٧
Bias current					4.5	6	mA
Discourse 1 th 200	V _I = 9 V to 25 V,	IO = 200 mA,	T _J = 0°C to 125°C			0.8	
Bias current change	IO = 5 mA to 350 mA,	, T _J = 0°C to 125	°C			0.5	mA
Short-circuit output current	V _I = 35 V		-		270		mA
Peak output current					0.7		Α

T All characteristics are measured with a 0.33-µF capacitor across the input and a 0.1-µF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.



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electrical characteristics at specified virtual junction temperature, V_I = 14 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

24244477			- 4	μ.	478M08	С	
PARAMETER	TEST CONDITIONST			MIN	TYP	MAX	UNIT
				7.7	. 8	8.3	
Output voltage ‡	V _I = 10.5 V to 23 V, T _J = 0°C to 125°C	I _O = 5 mA to 35	50 mA,	7.6		8.4	٧
Inn. A college as a substitute	I - 000 mA		$V_{\parallel} = 10.5 \text{ V to } 25 \text{ V}$		6	100	
Input voltage regulation	I _O = 200 mA		V _I = 11 V to 25 V		2	50	mV
Ripple rejection	V _I = 11.5 V to 21.5 V,	V _I = 11.5 V to 21.5 V, f = 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	56			dB
,			IO = 300 mA	56 80	80		
0	I _O = 5 mA to 500 mA	-			25	160	
Output voltage regulation	Io = 5 mA to 200 mA				10	80	mV
Temperature coefficient of output voltage	lo = 5 mA,	T _J = 0°C to 125	5°C		-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz	-			52		μV
Dropout voltage					2		V
Bias current					4.6	6	mA
Di-	V _I = 10.5 V to 25 V,	I _O = 200 mA,	T _J = 0°C to 125°C			0.8	
Bias current change	IO = 5 mA to 350 mA,	Tj = 0°C to 125	5°C			0.5	mA
Short-circuit output current	V _I = 35 V				250		mA
Peak output current				1	0.7		Α

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, V_I = 16 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

DARAMETER		TEST CONDITIONST			µА78М09С		
PARAMETER	'				TYP	MAX	UNIT
				8.6	9	9.4	
Output voltage ‡	V _j = 11.5 V to 24 V _i T _J = 0°C to 125°C	I _O = 5 mA to 3	50 mA,	8.5		9.5	٧
Innutualization	In - 200 - A		V ₁ = 11.5 V to 26 V		6	100	>/
Input voltage regulation	I _O = 200 mA		V _I = 12 V to 26 V		2	50	m∨
Ripple rejection	V _I = 13 V to 23 V,	f = 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	56			dB
			I _O = 300 mA	56	80		1
Outside the second states	IO = 5 mA to 500 mA				25	180	
Output voltage regulation	IO = 5 mA to 200 mA				10	90	m∨
Temperature coefficient of output voltage	I _O = 5 mA,	T _J = 0°C to 129	5°C		-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				58		μ۷
Dropout voltage					2		V
Bias current					4.6	6	mA
Diagram and alternative	V _I = 11.5 V to 26 V,	I _O = 200 mA,	T _J = 0°C to 125°C			0.8	
Bias current change	IO = 5 mA to 350 mA	, T _J = 0°C to 125	5°C			0.5	mA
Short-circuit output current	V ₁ = 35 V				250		mA
Peak output current				1	0.7		A

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.



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electrical characteristics at specified virtual junction temperature, V_{\parallel} = 17 V, I_{O} = 350 mA, T_{J} = 25°C (unless otherwise noted)

0404445550	TEST CONDITIONST			μ Α78M10C			UNIT	
PARAMETER				MIN	TYP	MAX	UNIT	
				9.6	10	10.4		
Output voltage ‡	V _I = 12.5 V to 25 V, T _J = 0°C to 125°C	I _O = 5 mA to 3	50 mA,	9.5		10.5	٧	
Innut valtage regulation	(n = 200 mA		V _I = 12.5 V to 28 V		7	100	>/	
Input voltage regulation	IO = 200 mA		V _I = 14 V to 28 V			2	50	mV
Ripple rejection	V _I = 15 V to 25 V,	f = 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	59			dB	
			I _O = 300 mA	55	80			
Outratus interes and details	IO = 5 mA to 500 mA		•		25	200		
Output voltage regulation	10 = 5 mA to 200 mA		-		10	100	m∨	
Temperature coefficient of output voltage	IO = 5 mA,	T _J = 0°C to 125	5°C		-1		mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz				64		μV	
Dropout voltage					2		٧	
Bias current					4.7	6	mA	
Pier summer to be summer.	V _I = 12.5 V to 28 V,	IO = 200 mA,	T _J = 0°C to 125°C			0.8	4	
Bias current change	IO = 5 mA to 350 mA,	T _J = 0°C to 12!	5°C			0.5	mA	
Short-circuit output current	V _I = 35 V				245		mA	
Peak output current					0.7		Α	

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, V_i = 9 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

040444750	TEST CONDITIONST			μ Α78M12C						
PARAMETER				MIN	TYP	MAX	UNIT			
				11.5	12	12.5				
Output voltage ‡	$V_{\rm J} = 14.5 \text{ V to } 27 \text{ V},$ $T_{\rm J} = 0^{\circ}\text{C to } 125^{\circ}\text{C}$	IO = 5 mA to 35	50 mA,	11.4		12.6	٧			
Innut veltoge regulation	In - 000 mA		V _I = 14.5 V to 30 V		8	100	mV			
Input voltage regulation	IO = 200 mA		V _I = 16 V to 30 V		2			2	50	mv
Ripple rejection	V _I = 15 V to 25 V,	f = 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	55			dB			
			I _O = 300 mA	55	80					
O do do de la collectica de la collectic	I _O = 5 mA to 500 mA				25	240	mV			
Output voltage regulation	IO = 5 mA to 200 mA				10	120	mv			
Temperature coefficient of output voltage	IO = 5 mA				-1		mV/°C			
Output noise voltage	f = 10 Hz to 100 kHz				75		μ٧			
Dropout voltage					2		٧			
Bias current					4.8	6	mA			
Piles and the second	V _I = 14.5 V to 30 V,	I _O = 200 mA,	T _J = 0°C to 125°C			0.8				
Bias current change	IO = 5 mA to 350 mA,	T _J = 0°C to 125	5°C			0.5	mA			
Short-circuit output current	V _I = 35 V				240		mA			
Peak output current					0.7		Α			

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.



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electrical characteristics at specified virtual junction temperature, V_{l} = 23 V, I_{O} = 350 mA, T_{J} = 25°C (unless otherwise noted)

	TEST CONDITIONS			μ Α78M15C			UNIT
PARAMETER				MIN	TYP	MAX	UNII
			_	14.4	15	15.6	
Output voltage‡	$V_{\parallel} = 17.5 \text{ V to } 30 \text{ V}, I_{\odot}$ $T_{\parallel} = 0^{\circ}\text{C} \text{ to } 125^{\circ}\text{C}$	= 5 mA to 35	0 mA,	14.25		15.75	>
to and an indicate and a second at least	1- 000 A		$V_{\parallel} = 17.5 \text{ V to } 30 \text{ V}$	14.25 V 10 54 54 70 25 10 -1 90 4.8	10	100	m۷
Input voltage regulation	1 _O = 200 mA		V _I = 20 V to 30 V			3	50
Ripple rejection	V _I = 18.5 V to 28.5 V, f =	= 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	54			dВ
	•	I _O = 300 mA	54	70		1	
	IO = 5 mA to 500 mA				25	300	m۷
Output voltage regulation	IO = 5 mA to 200 mA				10	150	mv
Temperature coefficient of output voltage	IO = 5 mA, T	j = 0°C to 125	<u></u>		-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				90		μ٧
Dropout voltage					2		V
Bias current					4.8	6	mA
Bi	V _I = 17.5 V to 30 V, IC	= 200 mA,	T _J = 0°C to 125°C			0.8	mA
Bias current change	IO = 5 mA to 350 mA, T	j = 0°C to 125	°C			0.5] ""A
Short-circuit output current	V ₁ = 35 V				240		mA
Peak output current					0.7		Α

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_L as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, V_I = 29 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

	TEST CONDITIONST			μ	UNIT		
PARAMETER				MIN	TYP	MAX	UNII
				19.2	20	20.8	
Output voltage ‡	V _I = 23 V to 35 V, I _O = 5 mA to 350 mA, T _J = 0°C to 125°C		19		21	٧	
Input voltage regulation	L- 000 A		V _I = 23 V to 35 V		10	100	mV
	IO = 200 mA		V _I = 24 V to 35 V		5	50	
Ripple rejection	V _I = 24 V to 34 V,		I _O = 100 mA, T _J = 0°C to 125°C	53			dB
			IO = 300 mA	53	70		
	I _O = 5 mA to 500 mA				30	400	mV
Output voltage regulation	I _O = 5 mA to 200 mA				10	200	mv
Temperature coefficient of output voltage	I _O = 5 mA,	T _J = 0°C to 129	5°C		-1.1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				110		μ٧
Dropout voltage					2		٧
Bias current					4.9	6	mA
St	V _I = 23 V to 35 V,	l _O = 200 mA,	T _J = 0°C to 125°C	1	0.8		mA
Bias current change	IO = 5 mA to 350 mA	Tj = 0°C to 12	5°C			0.5	'''A
Short-circuit output current	V _I = 35 V				240		mA
Peak output current	ľ				0.7		Α

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.



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electrical characteristics at specified virtual junction temperature, V_I = 33 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

24244			<u>-</u>	μ Α78M24C			110.00
PARAMETER	l TE	ST CONDITION	Si	MIN	TYP	MAX	UNIT
				23	24	25	
Output voltage ‡	V _I = 27 V to 38 V, T _J = 0°C to 125°C	T _J = 0°C to 125°C		22.8		25.2	٧
Input voltage regulation	In 200 mA		V _j = 27 V to 38 V		10	100	mV
input voitage regulation	IO = 200 mA		V ₁ = 28 V to 38 V		5	50	11114
Ripple rejection	V _I = 28 V to 38 V, f =	o 38 V, f = 120 Hz	I _O = 100 mA, T _J = 0°C to 125°C	50			dB
			I _O = 300 mA	50	70		
O to A solten a source to Man	IO = 5 mA to 500 mA				30	480	
Output voltage regulation	io = 5 mA to 200 mA			10 24			mV
Temperature coefficient of output voltage	IO = 5 mA,	T _J = 0°C to 125	5°C		-1.2		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				170		μV
Dropout voltage					2		V
Bias current					5	6	mA
Dies symmet shares	V _I = 27 V to 38 V,	I _O = 200 mA,	T _J = 0°C to 125°C	0.8 0.5		0.8	A
Bias current change	to = 5 mA to 350 mA,	T _J = 0°C to 125	5°C			mA	
Short-circuit output current	V _I = 35 V				240		mA
Peak output current					0.7		Α

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_{-I} as close to T_A as possible. Thermal effects must be taken into account separately.

[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.

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electrical characteristics at specified virtual junction temperature, V_1 = 10 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

PARAMETER	TTOT COMPLETANCE		μ#				
PARAMETER TEST CONDITIONS†		SI	MIN	TYP	MAX	UNIT	
Output voltage‡					5		V
1			V _I = 7 V to 25 V		3		
Input voltage regulation	IO = 200 mA		V _I = 8 V to 25 V		1		mV
Ripple rejection	V _I = 8 V to 18 V,	IO = 300 mA,	f = 120 Hz		80		d₿
	I _O = 5 mA to 500 mA			20			
Output voltage regulation	I _O = 5 mA to 200 mA					m۷	
Temperature coefficient of output voltage	I _O = 5 mA				-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				40		μ٧
Dropout voltage				T	2		V
Bias current	<u> </u>				4.5		mA
Short-circuit output current	V _I = 35 V	-			300		mA
Peak output current				1	0.7		Α

[†] All characteristics are measured with a 0.33-µF capacitor across the input and a 0.1-µF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, V_I = 11 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

24.24145752	TEST CONDITIONS†			μ			
PARAMETER				MIN	TYP	MAX	UNIT
Output voltage‡				1	6		V
facilities and a second state of		V _I = 8 V to 25 V		5			
Input voltage regulation	I _O = 200 mA	IO = 200 IIIA	V _I = 9 V to 25 V		1.5		m∨
Ripple rejection	V _I = 9 V to 19 V,	I _O = 300 mA,	f = 120 Hz		80		dB
Outro Augiliana and Alian	I _O = 5 mA to 500 mA			20			mV
Output voltage regulation	IO = 5 mA to 200 mA	I _O = 5 mA to 200 mA			10		
Temperature coefficient of output voltage	I _O = 5 mA				- 1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				45		μV
Dropout voltage					2		V
Bias current					4.5		mA
Short-circuit output current	V _I = 35 V				270		mA
Peak output current					0.7		Α

T All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.



[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.

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electrical characteristics at specified virtual junction temperature, $V_I = 14 \text{ V}$, $I_{O} = 350 \text{ mA}$, $T_{.I} = 25 ^{\circ}\text{C}$ (unless otherwise noted)

			μΑ78M08Y MIN TYP MAX			UNIT	
PARAMETER	TEST CONDITION	Şı				UNII	
Output voltage ‡				8		٧	
		V _I = 10.5 V to 25 V	6			mν	
Input voltage regulation	IO = 200 mA	V _I = 11 V to 25 V		2		mv	
Ripple rejection	V _I = 11.5 V to 21.5 V, I _O = 300 mA,	f = 120 Hz		80		dB	
I _O = 5 mA to 500 mA			25				
Output voltage regulation	I _O = 5 mA to 200 mA			10		- m∨	
Temperature coefficient of output voltage	1 _O = 5 mA			1		mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz	_		52		μV	
Dropout voltage				2		V	
Bias current	· _			4.6		mA	
Short-circuit output current	V _I = 35 V			250		mA	
Peak output current				0.7		Α	

[†] All characteristics are measured with a 0.33-uF capacitor across the input and a 0.1-uF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, $V_1 = 16 \text{ V}, I_O = 350 \text{ mA}, T_J = 25^{\circ}\text{C}$ (unless otherwise noted)

	TEST CONDITIONS!		μ Α78Μ09 Υ			UNIT		
PARAMETER	1	EST CONDITION	SI	MIN TYP MAX] UNII	
Output voltage ‡					9		٧	
Input voltage regulation	V _I = 11.5 V to 26		$V_{\parallel} = 11.5 \text{ V to } 26 \text{ V}$	/ 6			mν	
Input voltage regulation	I _O = 200 mA		V _I = 12 V to 26 V		2		<u> '''</u>	
Ripple rejection	V _I = 13 V to 23 V,	I _O = 300 mA,	f = 120 Hz		80		dB	
0.44	I _O = 5 mA to 500 mA			25			mV	
Output voltage regulation	IO = 5 mA to 200 mA				10] ""	
Temperature coefficient of output voltage	l _O = 5 mA,	T _J = 0°C to 125	5°C		-1		mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz				58		μV	
Dropout voltage					2		٧	
Bias current					4.6		mA	
Short-circuit output current	V ₁ = 35 V				250		mA	
Peak output current					0.7		Α	

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.



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electrical characteristics at specified virtual junction temperature, V_I = 17 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

240446772	-		•	μ Α78M10 Y			14000
PARAMETER	71	EST CONDITION	Sı	MIN	MAX	UNIT	
Output voltage ‡					10		V
land with a secondaria	1- 000 4	I _O = 200 mA	V _I = 12.5 V to 28 V		7		mV
Input voltage regulation	IO = 200 mA		V _I = 14 V to 28 V	<u> </u>	2		1 ^m v
Ripple rejection	V _I = 15 V to 25 V,	1 _O = 300 mA,	f = 120 Hz		80		d₿
O. A. A. alba an anadalian	I _O = 5 mA to 500 mA				25		T
Output voltage regulation	IO = 5 mA to 200 mA	·	•		10		m∨
Temperature coefficient of output voltage	IO = 5 mA				-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				64	-	μ٧
Dropout voltage					2		V
Bias current					4.7		mA
Short-circuit output current	V _I = 35 V				245		mA
Peak output current					0.7		A

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, $V_I = 9 \text{ V}$, $I_O = 350 \text{ mA}$, $T_J = 25^{\circ}\text{C}$ (unless otherwise noted)

DADAMETER		OT COMPLETION	.+	μ Α78M12Y		7	
PARAMETER	Τε	ST CONDITIONS	51	MIN	ТҮР	MAX	UNIT
Output voltage‡					12	,	٧
ton. A college and delice	1- 000 1	_	V _I = 14.5 V to 30 V		8		
Input voltage regulation	i _O = 200 mA		V _I = 16 V to 30 V		2		m∨
Ripple rejection	V _I = 15 V to 25 V,	IO = 300 mA,	f = 120 Hz		80		dΒ
Outro A vetto a a constation	I _O = 5 mA to 500 mA				25		mV
Output voltage regulation	IO = 5 mA to 200 mA	IO = 5 mA to 200 mA			10		
Temperature coefficient of output voltage	I _O = 5 mA				-1		mV/°C
Output noise voltage	f = 10 Hz to 100 kHz				75		μV
Dropout voltage					2		٧
Bias current			•		4.8		mA
Short-circuit output current	V _I = 35 V				240		mA
Peak output current					0.7		Α

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

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electrical characteristics at specified virtual junction temperature, V_I = 23 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

DADAMETED	TEST SOUDITION	ot.	μ Α78M15C		С	145117	
PARAMETER	TEST CONDITION	Si	MIN	TYP	MAX	UNIT	
Output voltage‡				15		V	
landa di kanananan kanan		V _I = 17.5 V to 30 V		10		T	
Input voltage regulation	l _O = 200 mA	V _I = 20 V to 30 V		3		mV	
Ripple rejection	V _I = 18.5 V to 28.5 V, I _O = 300 mA, I = 120 Hz			70		d₿	
0.1-1.1-1.1-1.1-1.1-1.1-1.1-1.1-1.1-1.1-	I _O = 5 mA to 500 mA		25				
Output voltage regulation	I _O = 5 mA to 200 mA	I _O = 5 mA to 200 mA		10		m∨	
Temperature coefficient of output voltage	I _O = 5 mA			-1		mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz			90		μ۷	
Dropout voltage				2		V	
Bias current				4.8		mA	
Short-circuit output current	V _I = 35 V			240		mA	
Peak output current				0.7		A	

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

electrical characteristics at specified virtual junction temperature, V_I = 29 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

DADAMETER	TEST CONDITIONST			µА78М20С			
PARAMETER				TYP	MAX	UNIT	
Output voltage‡				20		V	
land unback variation	L- 000 A	V _I = 23 V to 35 V		10			
Input voltage regulation	IO = 200 mA	V _I = 24 V to 35 V		5		m∨	
Ripple rejection	V _i = 24 V to 34 V, f = 120 Hz,	IO = 300 mA		70		dB	
Output valtage regulation	I _O = 5 mA to 500 mA		30			m۷	
Output voltage regulation	IO = 5 mA to 200 mA	I _O = 5 mA to 200 mA				'''v	
Temperature coefficient of output voltage	1 _O = 5 mA			-1.1		mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz			110		μV	
Dropout voltage				2		٧	
Bias current				4.9		mA	
Short-circuit output current	V ₁ = 35 V			240		mA	
Peak output current				0.7		Α	

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

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electrical characteristics at specified virtual junction temperature, V_I = 33 V, I_O = 350 mA, T_J = 25°C (unless otherwise noted)

DADAMETED			μ Α78M24 Y			
PARAMETER	TEST CON	DITIONS	MIN T	TINU		
Output voltage ‡				24	V	
		V _I = 27 V to 38 V		10		
Input voltage regulation	1 _O = 200 mA	V _I = 28 V to 38 V		5		
Ripple rejection	V _I = 28 V to 38 V, I _O = 30	0 mA, f = 120 Hz		70	dB	
Outside a lateral	I _O = 5 mA to 500 mA		30			
Output voltage regulation IO = 5 mA to 200 mA				10	m∨	
Temperature coefficient of output voltage	I _O = 5 mA		-	-1.2	mV/°C	
Output noise voltage	f = 10 Hz to 100 kHz			170	μ۷	
Dropout voltage				2	٧	
Bias current				5	mA	
Short-circuit output current	V _I = 35 V			240	mA	
Peak output current				0.7	A	

[†] All characteristics are measured with a 0.33-μF capacitor across the input and a 0.1-μF capacitor across the output. Pulse-testing techniques maintain T_J as close to T_A as possible. Thermal effects must be taken into account separately.

[‡] This specification applies only for dc power dissipation permitted by absolute maximum ratings.