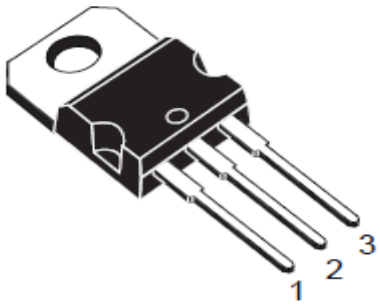
Three-terminal positive voltage regulator
OUTPUT CURRENT TO 1.2A
OUTPUT VOLTAGES OF 5; 6; 8; 9; 12V
THERMAL OVERLOAD PROTECTION
SHORT CIRCUIT PROTECTION
OUTPUT TRANSITION SOA PROTECTION

1、 Absolute Maximum Ratings Tc=25℃

Symbol	Parameter	Value	UNIT
VI	Input Voltage	35	V
TOPR	Operating Temperature Range	0 ～ +125	℃
TSTG	Storage Temperature Range	-65 ～+150	℃



TO-220

1 Input 2 Gnd 3 Out

2、Electrical Characteristics （Tc＝25℃）Of 7805 (refer to the test circuits,TJ = -55 to 150℃ VI = 10V, IO = 500 mA, CI = 0.33 μF, CO = 0.1 μF unless otherwise specified)。

Parameter	Symbol	Test Condition		MIN	TYP	MAX	UNIT
Output Voltage	VO	TJ = +25℃		4.8	5	5.2	V
		IO = 5mA to 1A, PO ≤ 15W VI = 8V to 20V		4.75	5	5.25	
Line Regulation (Note1)	Δ VO	TJ = +25℃	VI = 7V to 25V			100	mV
			VI = 8V to 12V			50	
Load Regulation (Note1)	Δ VO	TJ = +25℃ IO = 5mA to 1.2A				100	mV
		TJ = +25℃ IO = 250mA to 750mA				50	
Quiescent Current	IQ	TJ = +25℃				6	mA
Quiescent Current Change	Δ IQ	IO = 5mA to 1A				0.5	mA
		VI = 8V to 25V				0.8	
Quiescent Current Change	Δ Vo/Δ T	IO = 5mA			0.6		mV/℃
Short Circuit Current	ISC	TJ = +25° C, VI = 35V			0.75	1.2	A

3、Electrical Characteristics （Tc＝25℃）Of 7806(refer to the test circuits,TJ = -55 to 150℃ VI = 11V，
IO = 500 mA，CI = 0.33 μF， CO = 0.1 μF unless otherwise specified)。

Parameter	Symbol	Test Condition		MIN	TYP	MAX	UNIT
Output Voltage	VO	TJ = +25℃		5.75	6	6.25	V
		IO = 5mA to 1A, PO ≤ 15W VI = 9V to 21V		5.65	6	6.35	
Line Regulation (Note1)	Δ VO	TJ = +25℃	VI = 8V to 25V			100	mV
			VI = 9V to 13V			50	
Load Regulation (Note1)	Δ VO	TJ = +25℃ IO = 5mA to 1.2A				100	mV
		TJ = +25℃ IO = 250mA to 750mA				50	
Quiescent Current	IQ	TJ = +25℃				6	mA
Quiescent Current Change	Δ IQ	IO = 5mA to 1A				0.5	mA
		VI = 9V to 25V				0.8	
Quiescent Current Change	Δ Vo/Δ T	IO = 5mA			0.7		mV/℃
Short Circuit Current	ISC	TJ = +25° C, VI = 35V			0.75	1.2	A

4、Electrical Characteristics （Tc＝25℃）Of 7808(refer to the test circuits，TJ = -55 to 150℃ VI = 14V，IO = 500 mA，CI = 0.33 μF， CO = 0.1 μF unless otherwise specified)。

Parameter	Symbol	Test Condition		MIN	TYP	MAX	UNIT
Output Voltage	VO	TJ = +25℃		7.7	8	8.3	V
		IO = 5mA to 1A, PO ≤ 15W VI = 11.5V to 23V		7.6	8	8.4	
Line Regulation (Note1)	Δ VO	TJ = +25℃	VI = 10.5V to 25V			100	mV
			VI = 11V to 17V			50	
Load Regulation (Note1)	Δ VO	TJ = +25℃ IO = 5mA to 1.2A				100	mV
		TJ = +25℃ IO = 250mA to 750mA				50	
Quiescent Current	IQ	TJ = +25℃				6	mA
Quiescent Current Change	Δ IQ	IO = 5mA to 1A				0.5	mA
		VI = 11.5V to 25V				1	
Quiescent Current Change	Δ Vo/Δ T	IO = 5mA			1		mV/℃
Short Circuit Current	ISC	TJ = +25° C, VI = 35V			0.75	1.2	A

5、Electrical Characteristics （Tc＝25℃）Of 7809(refer to the test circuits，TJ = -55 to 150℃ VI = 15V，IO = 500 mA，CI = 0.33 μ F， CO = 0.1 μ F unless otherwise specified)。

Parameter	Symbol	Test Condition		MIN	TYP	MAX	UNIT
Output Voltage	VO	TJ = +25℃		8.64	9	9.36	V
		IO = 5mA to 1A, PO ≤ 15W VI = 11.5V to 26V		8.55	9	9.45	
Line Regulation (Note1)	Δ VO	TJ = +25℃	VI = 11.5V to 26V			100	mV
			VI = 12V to 18V			50	
Load Regulation (Note1)	Δ VO	TJ = +25℃ IO = 5mA to 1.2A				100	mV
		TJ = +25℃ IO = 250mA to 750mA				50	
Quiescent Current	IQ	TJ = +25℃				6	mA
Quiescent Current Change	Δ IQ	IO = 5mA to 1A				0.5	mA
		VI = 11.5V to 26V				1	
Quiescent Current Change	Δ Vo/Δ T	IO = 5mA			1		mV/℃
Short Circuit Current	ISC	TJ = +25° C, VI = 35V			0.75	1.2	A

6、Electrical Characteristics （Tc＝25℃）Of 7812 (refer to the test circuits, TJ = -55 to 150℃ VI = 19V, IO = 500 mA, CI = 0.33 μ F, CO = 0.1 μ F unless otherwise specified)。

Parameter	Symbol	Test Condition		MIN	TYP	MAX	UNIT
Output Voltage	VO	TJ = +25℃		11.5	12	12.5	V
		IO = 5mA to 1A, PO ≤ 15W VI =15.5V to 27V		11.4	12	12.6	
Line Regulation (Note1)	Δ VO	TJ = +25℃	VI = 14.5V to 30V			100	mV
			VI = 16V to 22V			50	
Load Regulation (Note1)	Δ VO	TJ = +25℃ IO = 5mA to 1.2A				100	mV
		TJ = +25℃ IO = 250mA to 750mA				50	
Quiescent Current	IQ	TJ = +25℃				6	mA
Quiescent Current Change	Δ IQ	IO = 5mA to 1A				0.5	mA
		VI = 15V to 30V				1	
Quiescent Current Change	Δ Vo/Δ T	IO = 5mA			1.5		mV/℃
Short Circuit Current	ISC	TJ = +25° C, VI = 35V			0.75	1.2	A

7、Typical Characteristics

Figure 1: Dropout Voltage vs Junction Temperature

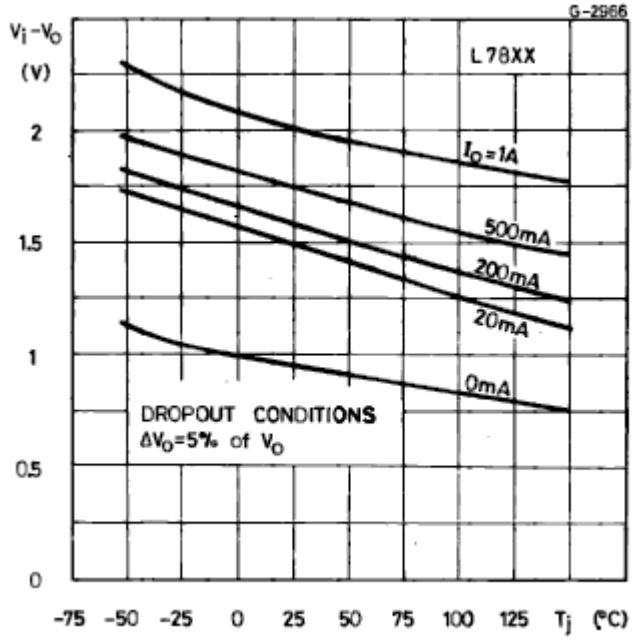


Figure 2: Peak Output Current vs Input/output Differential Voltage

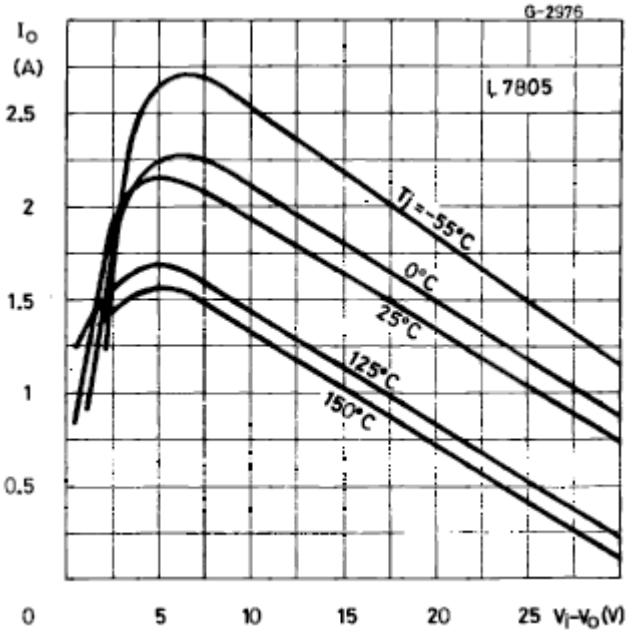


Figure3: Supply Voltage Rejection vs Frequency Temperature

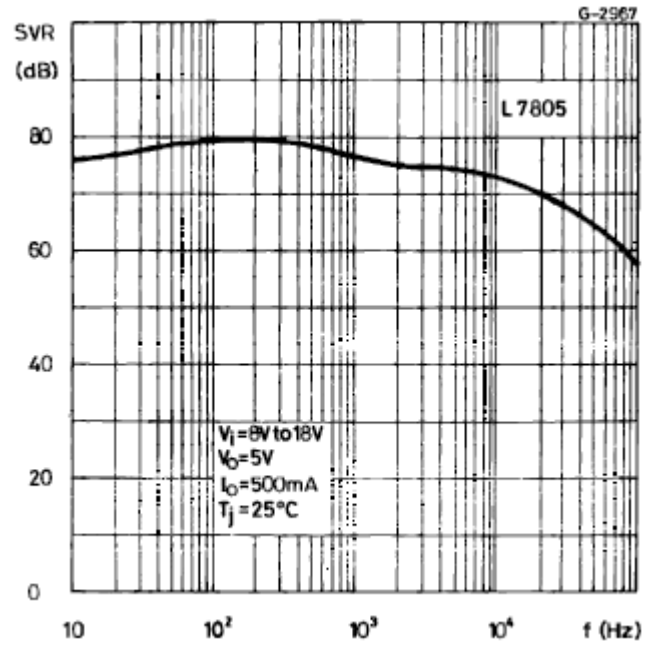


Figure 4: Quiescent Current vs Junction

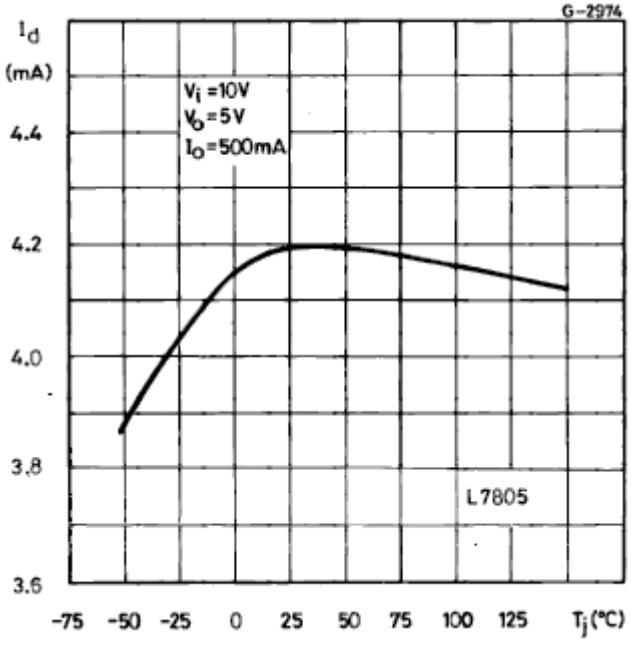


Figure 5: Output Voltage vs Junction Temperature

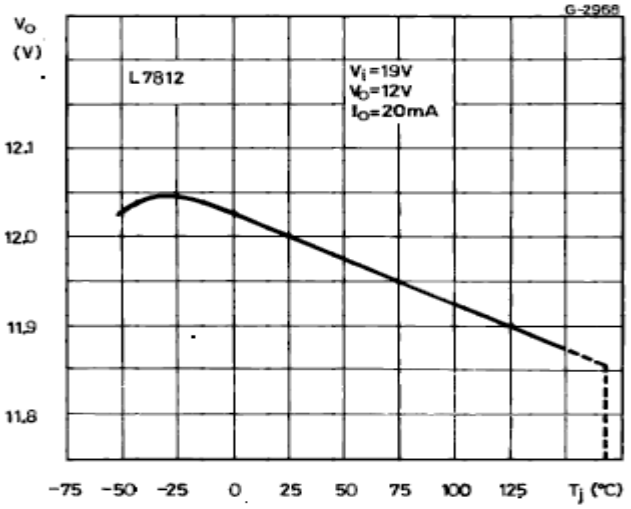


Figure 6: Load Transient Response

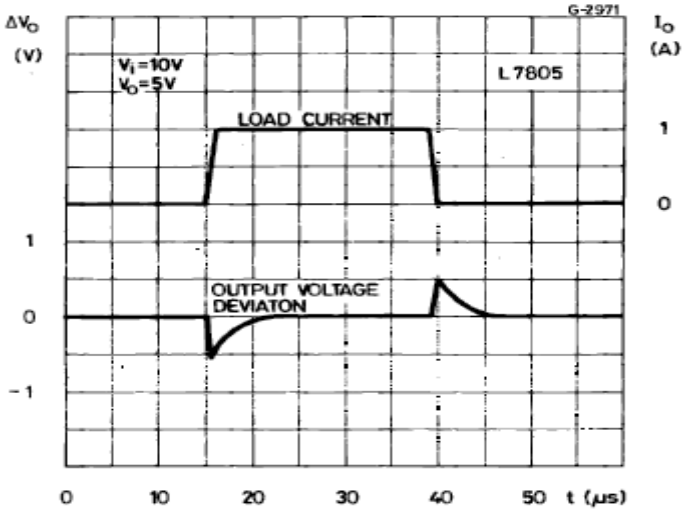


Figure 7: Output Impedance vs Frequency

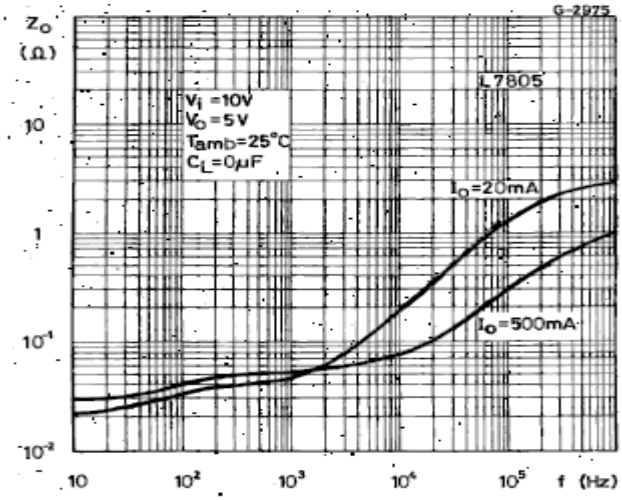


Figure 8: Line Transient Response

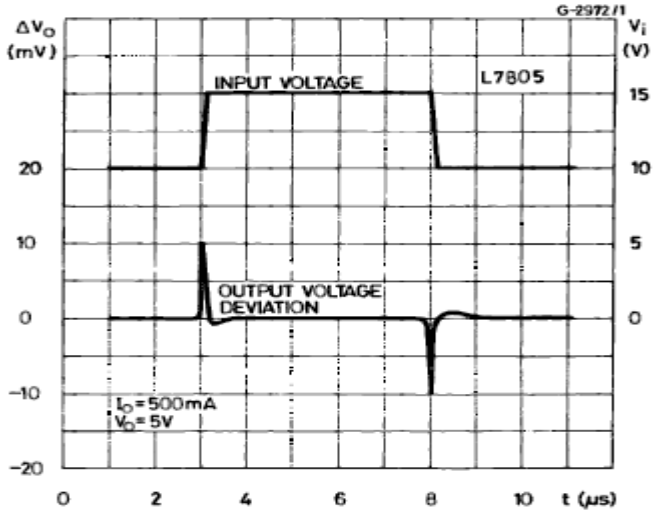
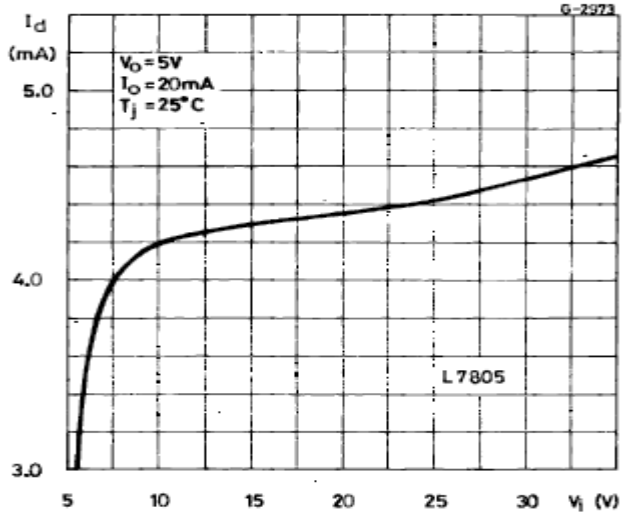


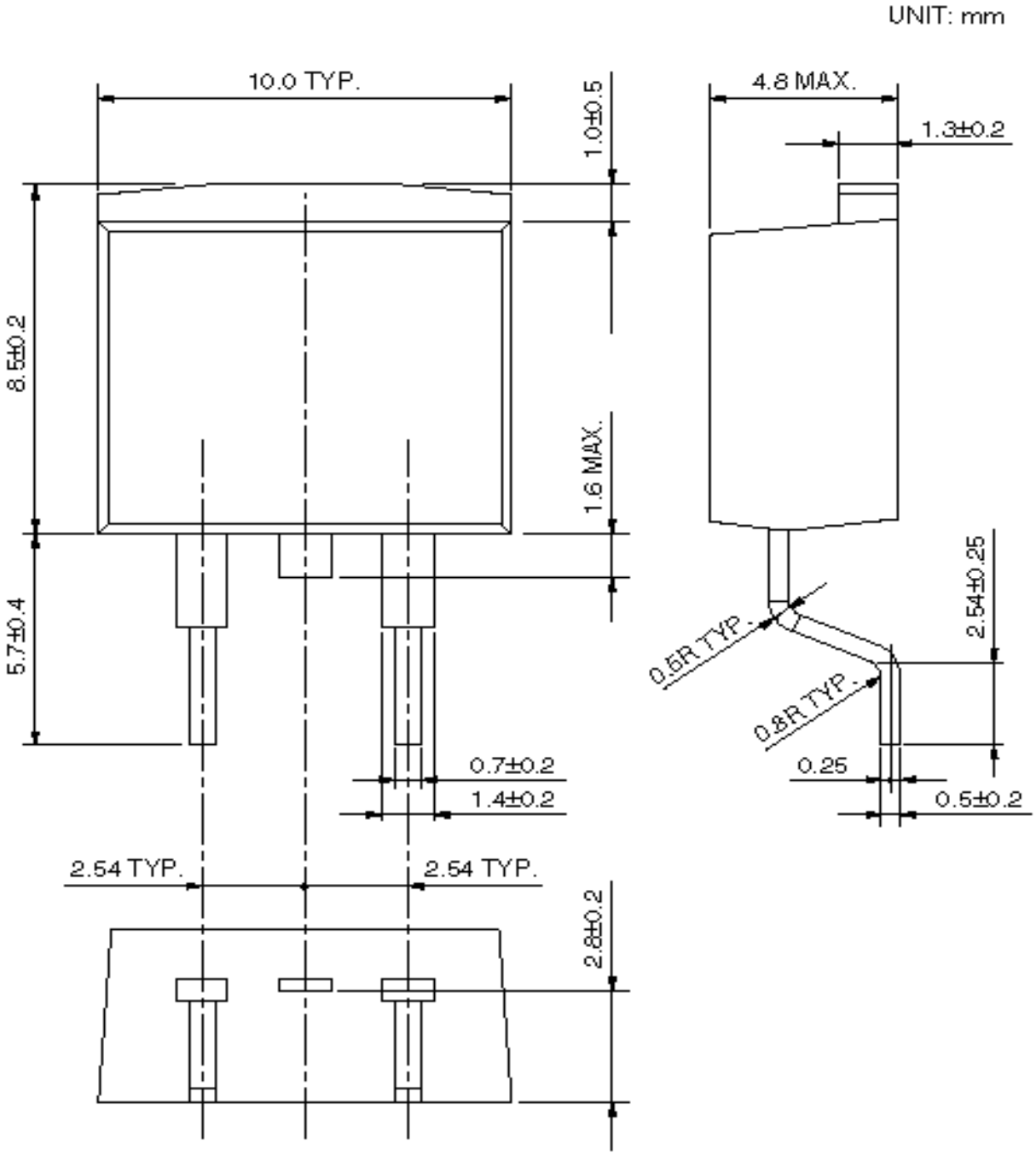
Figure 9: Quiescent Current vs Input Voltage



8、Package Demensions

TO-263-3

TO-263封装尺寸：



: The area without solder plated

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