



## Linear Integrated Circuit 3-Terminal 1.5A Positive Voltage Regulator

### Description

The 78W24G family is monolithic fixed voltage regulator integrated circuit. They are suitable for applications that required supply current up to 1.5A.

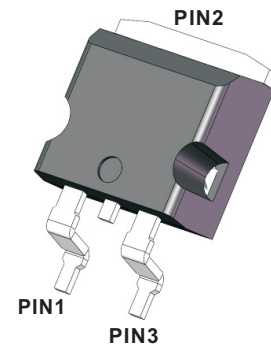
### Features

- Output current up to 1.5A
- Fixed output voltage of 24V available
- Thermal overload shutdown protection
- Output transistor SOA protection

### Mechanical data

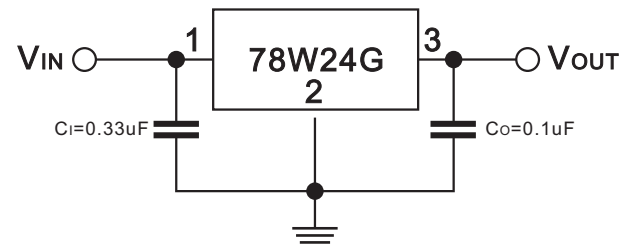
- Case: TO-263-2L
- Approx. Weight: 1.52g ( 0.049oz)
- RoHS compliant
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".

TO-263-2L(Prefix :G)



ROHS  
COMPLIANT

### APPLICATION CIRCUIT



### ■ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

PARAMETER		SYMBOLS	RATINGS	UNIT
Drain-Source Voltage	$V_{OUT}=5\sim 15V$	$V_{IN}$	40	V
Output Current		$I_{OUT}$	1.5	A
Power Dissipation		$P_D$	Internally Limited	W
Operating Temperature		$T_{OPR}$	-0 ~ +150	°C
Storage Temperature		$T_{STG}$	-65 ~ +150	°C

Note: 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.

### ■THERMAL DATA

PARAMETER	SYMBOLS	RATINGS	UNIT
Junction to Ambient	$R_{thJA}$	61.5	°C/W
Junction to Case	$R_{thJC}$	2.0	°C/W



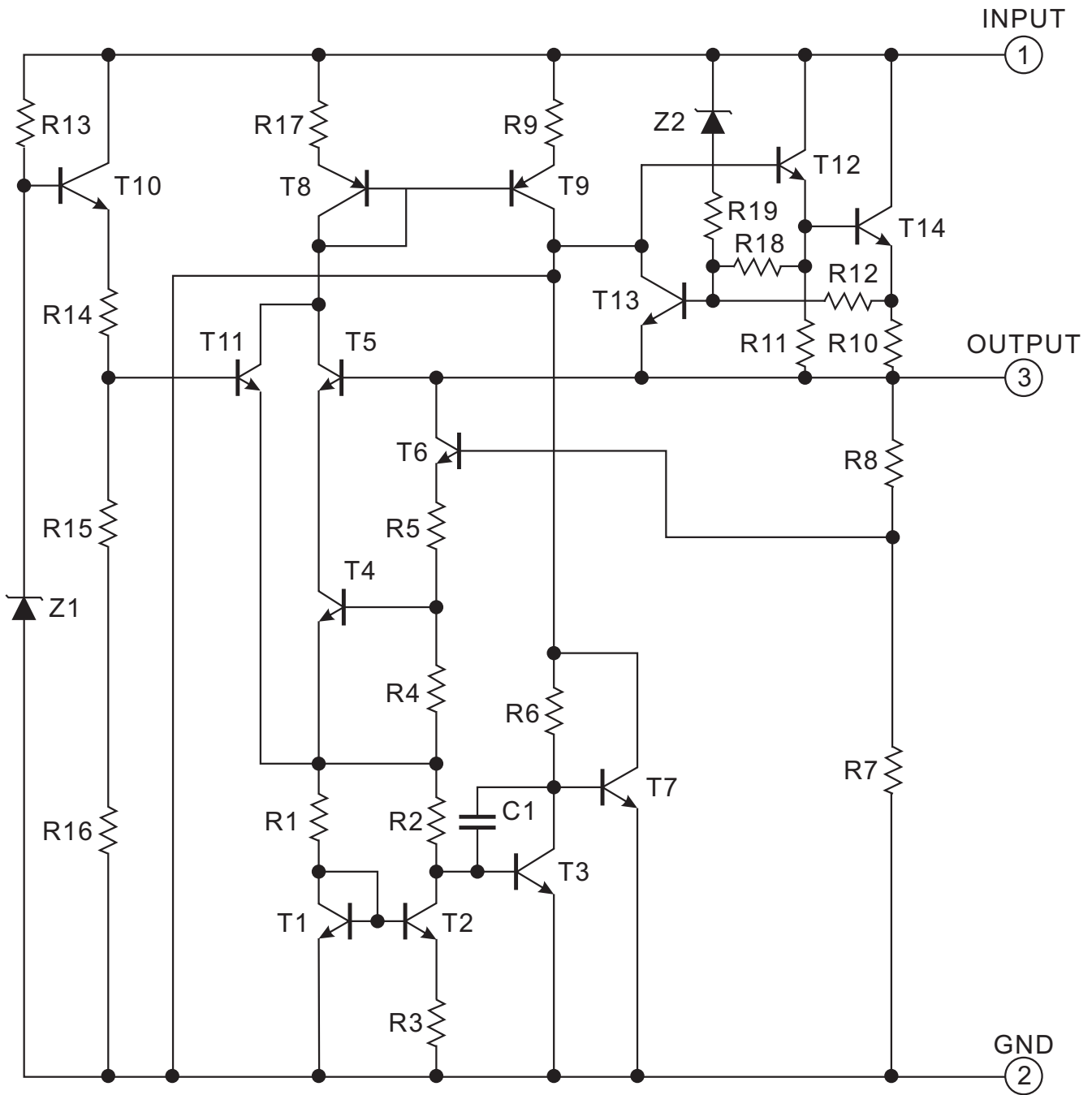
■ELECTRICAL CHARACTERISTICS ( $I_{OUT}=1.5A$ ,  $T_J=0^{\circ}C\sim 125^{\circ}C$ ,  $C_I=0.33\mu F$ ,  $C_O=0.1\mu F$ , unless otherwise specified)  
(Note 1)

78W24G ( $V_{IN}=33V$ )

PARAMETER	SYMBOLS	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA \sim 1.5A$	23	24	25	V
		$V_{IN}=27V \sim 38V$ , $I_{OUT}=5mA \sim 1.0A$ , $P_D \leq 15W$	22.8		25.2	V
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$		2.0		V
Output Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA \sim 1.5A$		12	480	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=0.25A \sim 0.75A$		4	240	mV
Input regulation	$\Delta V_{OUT}$	$V_{IN}=27V \sim 38V$ , $T_J=25^{\circ}C$		18	480	mV
		$V_{IN}=30V \sim 36V$ , $T_J=25^{\circ}C$		6	240	mV
Quiescent Current	$I_Q$	$T_J=25^{\circ}C$ , $I_{OUT} \leq 1.5A$			8.0	mA
Quiescent Current Change	$\Delta I_Q$	$V_{IN}=27V \sim 38V$			1.0	mA
		$I_{OUT}=5mA \sim 1.0A$			0.5	mA
Output Noise Voltage	eN	$10Hz \leq f \leq 100kHz$		170		uV
Ripple Rejection	RR	$V_{IN}=28V \sim 38V$ , $f=120Hz$ , $T_J=25^{\circ}C$	50	66		dB
Peak Output Current	$I_{PEAK}$	$T_J=25^{\circ}C$		2.1		A



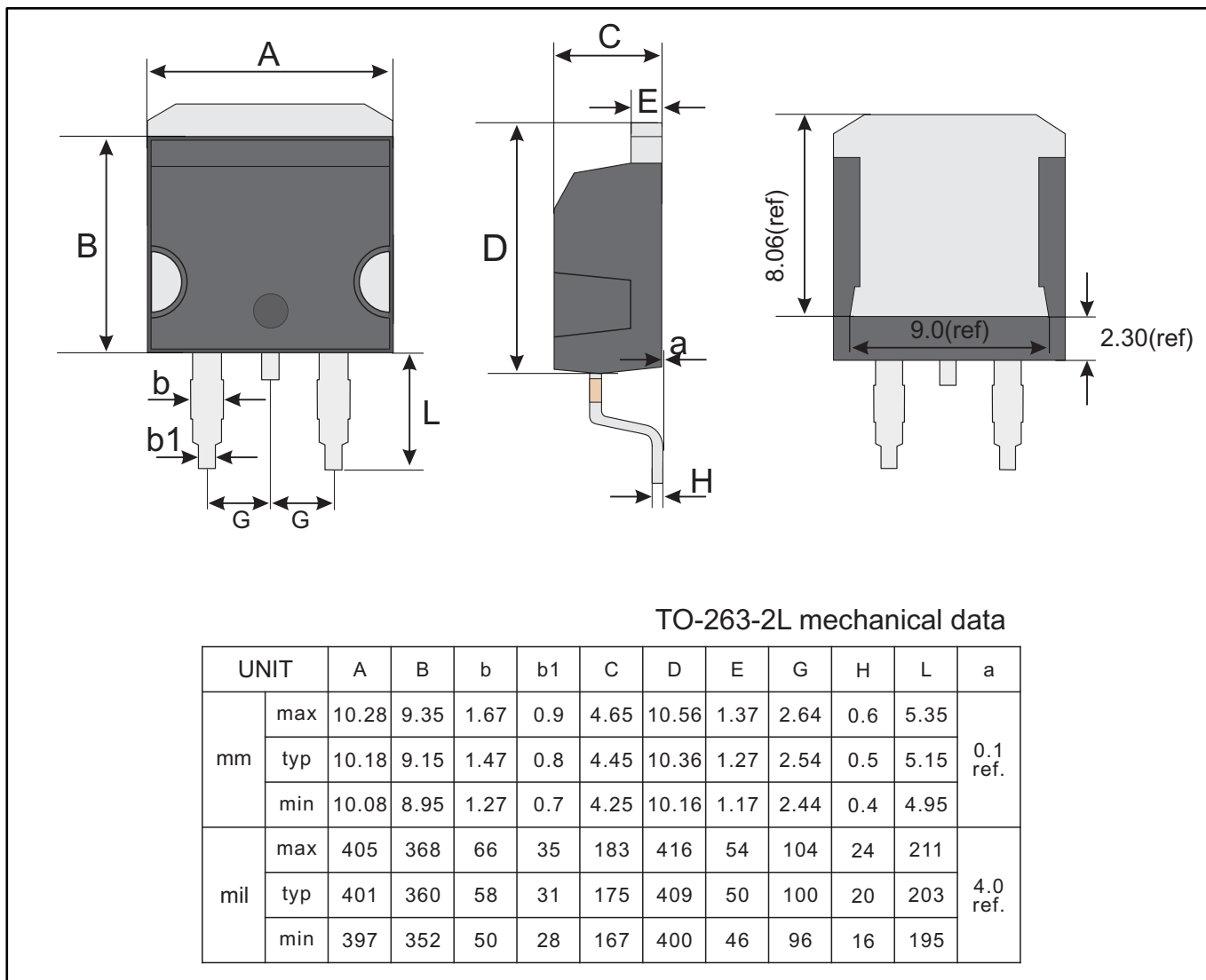
■ Test Circuits





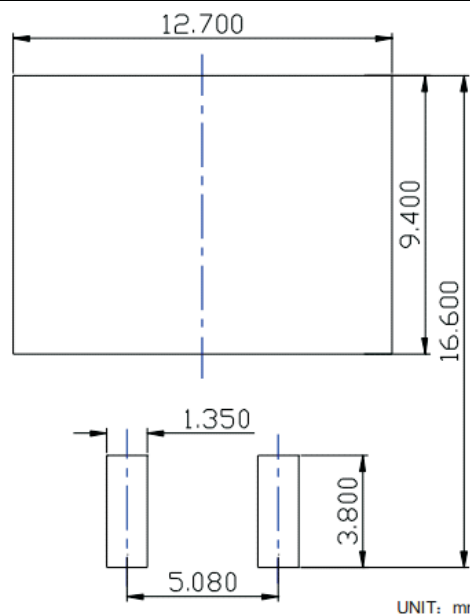
Package Outline  
Plastic surface mounted package; 2 leads

TO-263-2L



Marking

Type number	Marking code
78W24G	78W24G



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT



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文件履历表

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