

	CHIP APPEARANCE		CHIP SIZE	0,8 × 0,75 mm
			CHIP THICKNESS	460 ± 30 μm (or 360 ± 30 μm)
	BONDING	1	GROUND	92 × 92 μm
	PAD	2	INPUT	92 × 92 μm
	DIMENSION	3	OUTPUT	92 × 92 μm
	SCRIBE LINE WIDTH			80 μm
	TOP METAL			Al
	BACK METAL			– (or Ti-Ni-Ag)
	WAFER SIZE			100mm

Absolute maximum ratings over operating temperature range (unless otherwise noted) (TO-92)

Parameter	Max ratings	Unit
Input voltage	25	V
Operating free-air, case, or virtual junctions temperature range	0 to 150	°C
Storage temperature range	-65 to 150	
Lead temperature 1.6 mm (1/16 inch) from case for 10 seconds	260	

78L33n.d.

Recommended operating conditions

Parameter	Min	Max	Unit
Input voltage V_I	5,8	20	V
Output current, I_O		100	mA
Operating virtual junction temperature, T_J	0	125	°C

Electrical characteristics at specified virtual junction temperature, $V_I=8.3V$, $I_O=40mA$ (TO-92)

Parameter	Test conditions*	78L33n.d.			Unit	
		Min	Typ	Max		
Output voltage**		25°C	3,168	3,3	3,432	V
	$I_O=1mA$ to 40mA, $V_I=5,8V$ to 20V	0°C to 125°C	3,135	3,3	3,465	
			$I_O=1mA$ to 70mA	3,135	3,3	
Input regulation	$V_I=5,8V$ to 20V	25°C		32	150	mV
	$V_I=6,3V$ to 20V			26	100	
Ripple rejection	$V_I=6,3V$ to 16,3V, $f=120Hz$	0°C to 125°C	41	49		dB
Output regulation	$I_O=1mA$ to 150mA	25°C		25	100	mV
	$I_O=1mA$ to 40mA			8	30	
Output noise voltage	$f=10Hz$ to 100KHz	25°C		42		μV
Dropout voltage	$I_O=100mA$	25°C		2,5		V
Bias current		25°C		3,8	6	mA
		125°C			5,5	
Bias current change	$V_I=6,3V$ to 20V	0°C to 125°C			1,5	
	$I_O=1mA$ to 40mA				0,1	

* Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately. All characteristics are measured with a 0.33μF capacitor across the input and a 0.1 μF capacitor across the output.

** This specification applies only for dc power dissipation permitted by absolute maximum ratings.