

### FEATURES

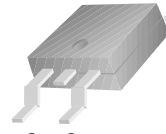
- Maximum output current  
 $I_{OM}$ : 1.5 A
- Output voltage  
 $V_O$ : 5V

1.IN  
2.GND  
3.OUT



1 2 3

TO-220



1 2 3

TO-252

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

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	65	$^{\circ}C/W$
Operating Junction Temperature Range	$T_{OPR}$	-20~+125	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-65~+150	$^{\circ}C$

### TCL7805 ELECTRICAL CHARACTERISTICS

(Refer to test circuits,  $0 < T_j < 125^{\circ}C$ ,  $I_o = 500mA$ ,  $V_i = 10V$ ,  $C_i = 0.33\mu F$ ,  $C_o = 0.1\mu F$ , unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Output voltage	$V_o$	$T_j = 25^{\circ}C$	4.8	5.0	5.2	V
		$5.0mA < I_o < 1.0A$ , $P_D < 15W$ $V_i = 7.5V$ to 20V	4.75	5.00	5.25	V
Line regulation	$\Delta V_o$	$T_j = 25^{\circ}C$ , $V_i = 7.5V$ to 25V	-	4.0	100	mV
		$T_j = 25^{\circ}C$ , $V_i = 8V$ to 12V	-	1.6	50	mV
Load regulation	$\Delta V_o$	$T_j = 25^{\circ}C$ , $I_o = 5.0mA$ to 1.5A	-	9	100	mV
		$T_j = 25^{\circ}C$ , $I_o = 250mA$ to 750mA	-	4	50	mV
Quiescent current	$I_Q$	$T_j = 25^{\circ}C$	-	5.0	8	mA
Quiescent current change	$\Delta I_Q$	$I_o = 5mA$ to 1.0A	-	-	0.5	mA
		$V_i = 8V$ to 25V	-	-	0.8	mA
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5mA$	-	0.8	-	mV/ $^{\circ}C$
Output noise voltage	$V_N$	$f = 10Hz$ to 100kHz, $T_a = 25^{\circ}C$	-	42	-	$\mu V$
Ripple rejection	RR	$f = 120Hz$ , $V_i = 8V$ to 18V	62	73	-	dB
Dropout voltage	$V_o$	$I_o = 1.0A$ , $T_j = 25^{\circ}C$	-	2	-	V
Output resistance	$R_o$	$f = 1kHz$	-	15	-	$m\Omega$
Short circuit current	$I_{sc}$	$V_i = 35V$ , $T_a = 25^{\circ}C$	-	230	-	mA
peak current	$I_{pk}$	$T_j = 25^{\circ}C$	-	2.2	-	A

### Ordering Information

Device	Package	Reel	Shipping
TCL7805_TC	SOT252	7"	2500 / Tape & Reel