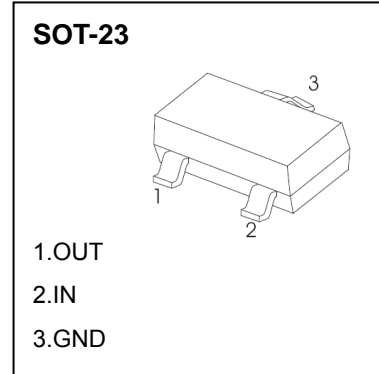


**SOT-23 Encapsulate Three-terminal Voltage Regulator**

**CJ28L05** Three-terminal positive voltage regulator

**FEATURES**

- Maximum output current  
 $I_o$ : 100mA
- Output voltage  
 $V_o$ : 5 V
- Continuous total dissipation  
 $P_D$ : Internal limited



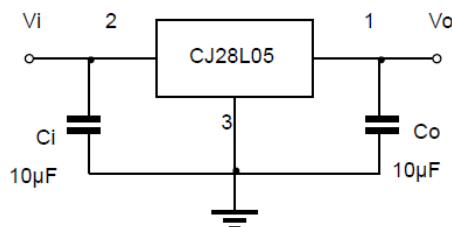
**ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)**

Parameter	Symbol	Value	Unit
Input Voltage Range	$V_I$	-0.3~+45	V
Operating Ambient Temperature Range	$T_{OPR}$	-40~+85	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	285	°C/W

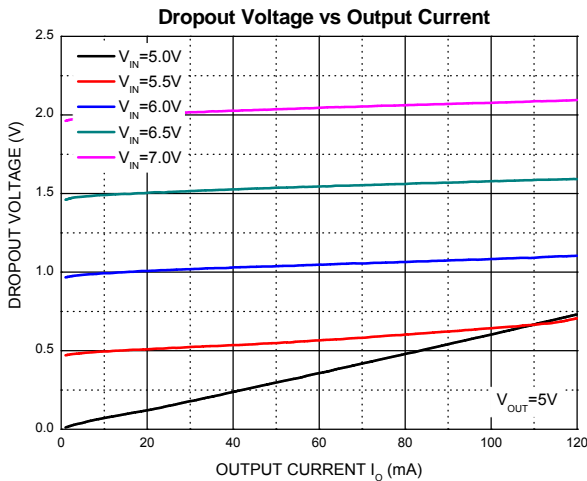
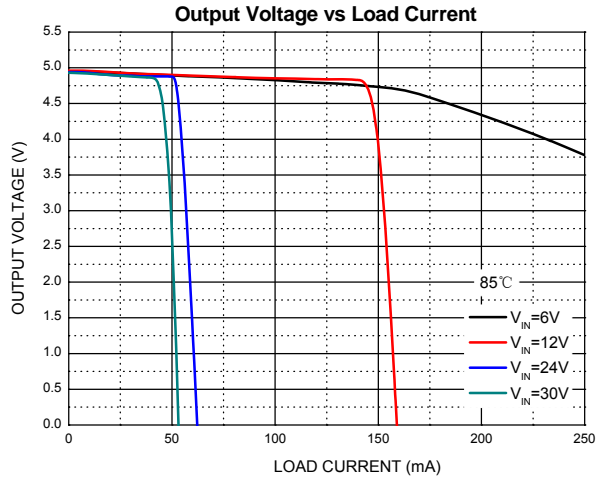
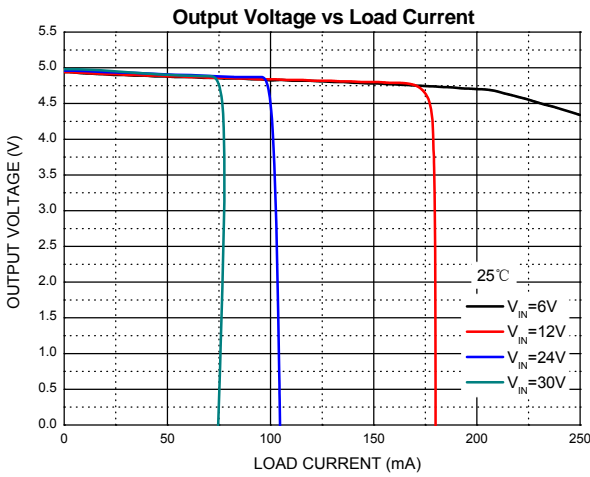
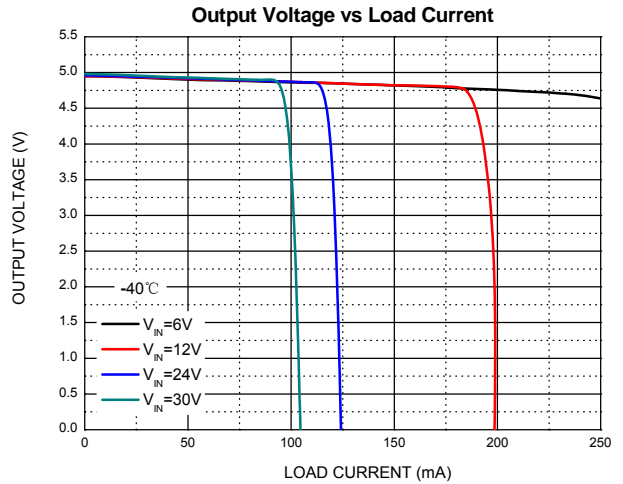
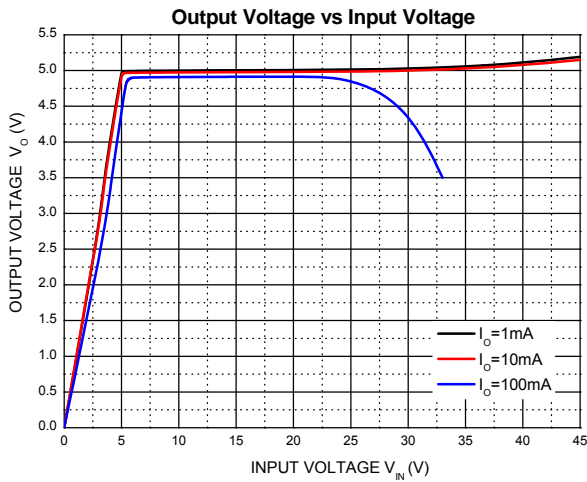
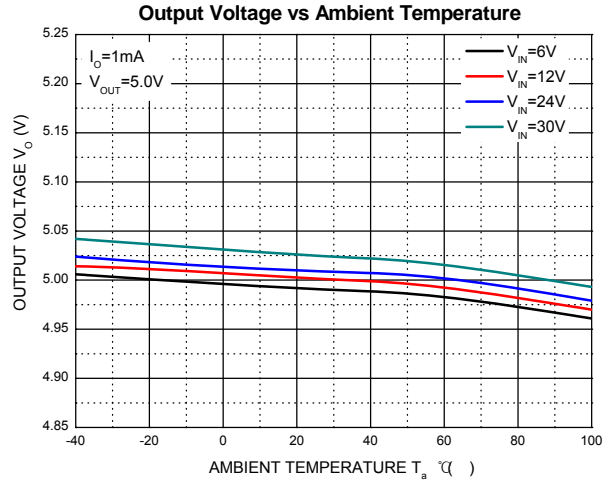
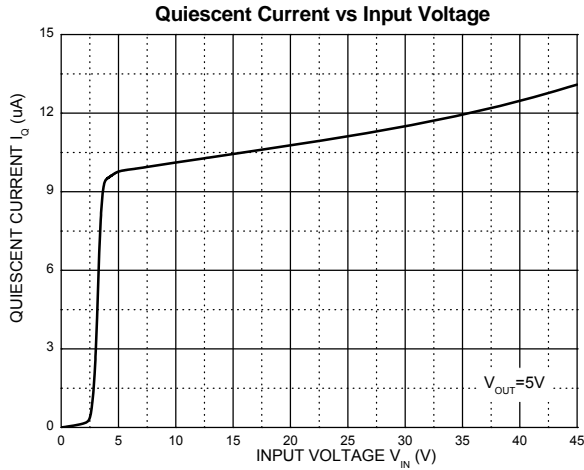
**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ ,  $V_I=12\text{V}$ ,  $C_i=C_o=10\mu\text{F}$ , unless otherwise specified )**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Input voltage	$V_I$	$I_o=10\text{mA}$	4.75		40	V
Output voltage	$V_o$	$I_o=10\text{mA}$	4.9	5	5.1	V
Load regulation	$\Delta V_o$	$I_o=1\text{mA}-100\text{mA}$		0.6		%
Line regulation	$\Delta V_o$	$7\text{V} \leq V_I \leq 24\text{V}, V_o=5\text{V}, I_o=1\text{mA}$		0.02		%/V
		$7\text{V} \leq V_I \leq 45\text{V}, V_o=5\text{V}, I_o=1\text{mA}$		0.1		%/V
Quiescent current	$I_q$	$V_I=7\text{V}, \text{No load}$			15	$\mu\text{A}$
		$V_I=24\text{V}, \text{No load}$			16	
		$V_I=40\text{V}, \text{No load}$			20	
Dropout Voltage	$V_d$	$I_o=1\text{mA}$			12	mV
		$I_o=100\text{mA}$			1200	mV
Output noise voltage	$V_N$	$I_o=10\text{mA}$	-100		100	$\mu\text{V}$
Ripple rejection	RR	$V_I=7\text{V}, V_{PP}=0.5\text{V}, I_o=1\text{mA}$	$f=100\text{Hz}$		60	dB
			$f=1\text{kHz}$		45	
			$f=10\text{kHz}$		35	
Maximum output current	$I_{PK}$	$R_L=1\Omega$	180		460	mA
Thermal protection	$T_{SD}$	$I_o=1\text{mA}$		165		°C
Thermal protection Hys	$T_{SD\_HYS}$	$I_o=1\text{mA}$		30		°C
Temperature coefficient	$\Delta V_o/\Delta T$	$I_o=1\text{mA}$		$\pm 0.5$		mV/°C

**TYPICAL APPLICATION**



# Typical Characteristics



## SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

## SOT-23 Suggested Pad Layout



**Note:**

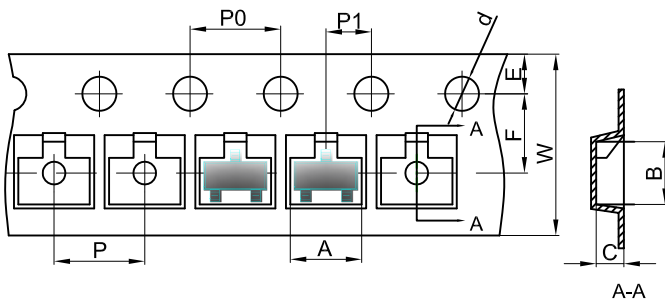
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

### NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

# SOT-23 Tape and Reel

## SOT-23 Embossed Carrier Tape



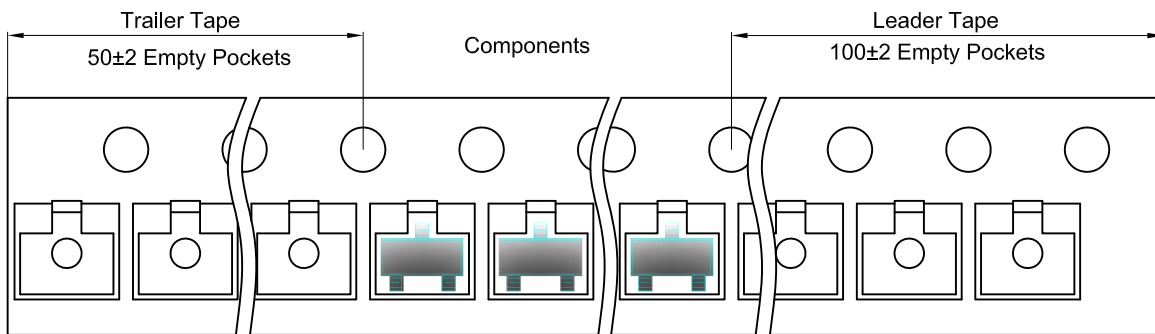
### Packaging Description:

SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

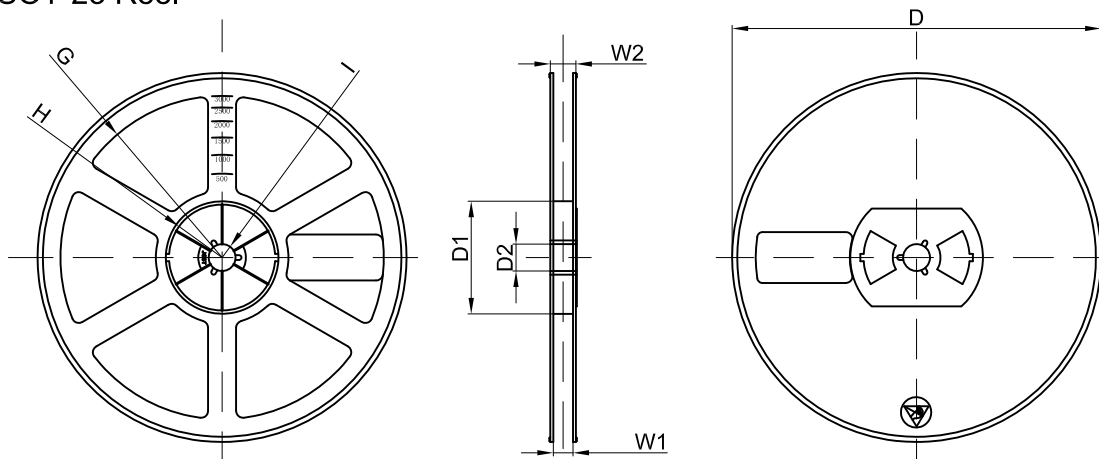
Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

## SOT-23 Tape Leader and Trailer



## SOT-23 Reel



Dimensions are in millimeter

Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	