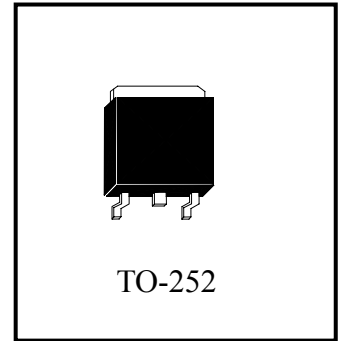


**Three Terminal Positive Voltage Regulators**

# LM78D05XJ3

These voltage regulators are monolithic integrated circuits designed as fixed voltage regulators for a wide variety of applications including local, on-card regulation. These regulators employ internal current limiting, thermal shutdown, and safe-area compensation. With adequate heatsinking they can deliver output currents in excess of 1.0A. Although designed primarily as fixed voltage regulator, these devices can be used with external components to obtain adjustable voltages and currents.



**Maximum Ratings**

Rating	Symbol	Value	Unit
Input Voltage	V <sub>IN</sub>	35	V
Output Current	I <sub>o</sub>	1	A
Power Dissipation	P <sub>D</sub>	15	W
Operating Junction Temperature Range	T <sub>J</sub>	0 to +125	°C

**Ordering Information**

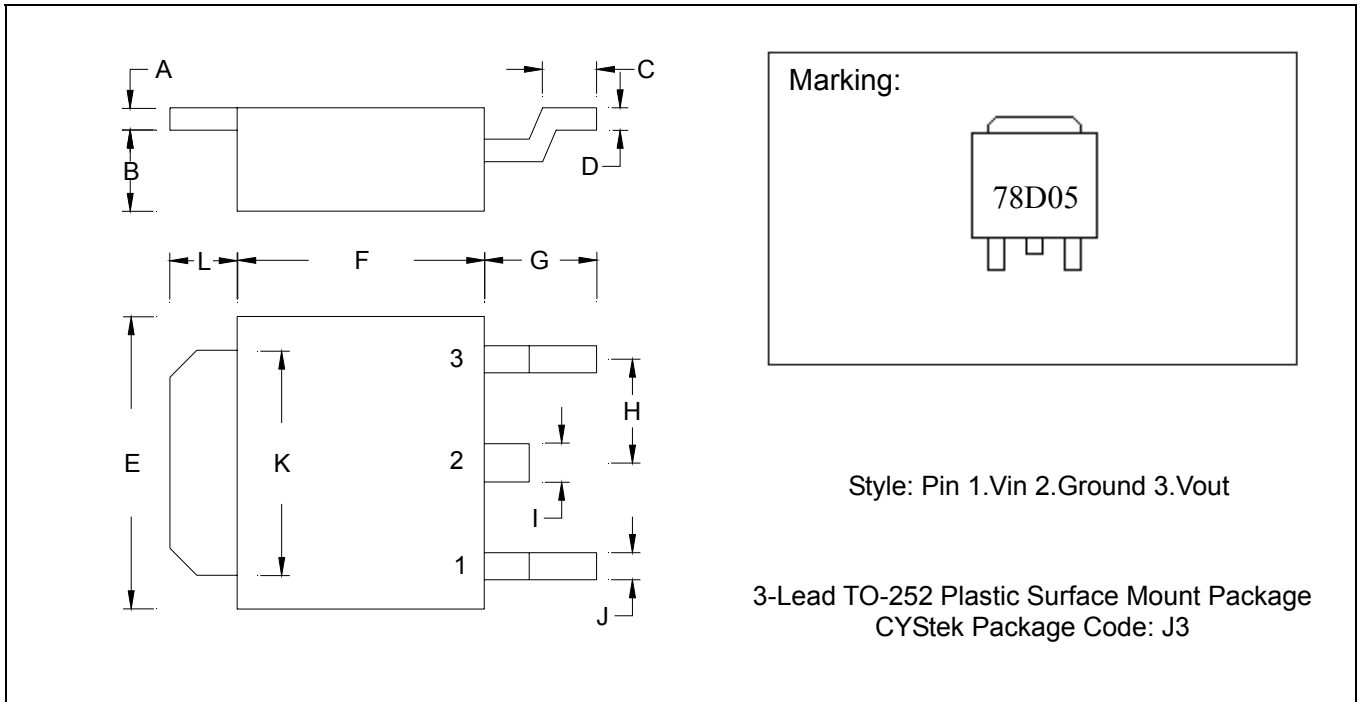
Device	Output Voltage Tolerance	Package
LM78D05AJ3	3%	TO-252
LM78D05BJ3	5%	TO-252



**Electrical Characteristics**  $V_{IN}=10V, I_{OUT}=500mA, T_J=25^{\circ}C, C_{IN}=0.33\mu F, C_{OUT}=0.1\mu F,$   
unless otherwise specified

Characteristics	Symbol	Test Condition	Min	Typ	Max	Unit
Output Voltage LM78D05A LM78D05B	$V_o$		4.85 4.75	5.0 5.0	5.15 5.25	V
Output Voltage LM78D05A LM78D05B	$V_o$	$5.0mA \leq I_{OUT} \leq 1.0A, P_D \leq 15W$	4.85 4.75	5.0 5.0	5.15 5.25	V
Line Regulation	$\Delta V_o$	$7V \leq V_{IN} \leq 25V$ $8V \leq V_{IN} \leq 25V$	- -	- -	50 25	mV
Load Regulation	$\Delta V_o$	$5.0mA \leq I_{OUT} \leq 1.5A$ $250mA \leq I_{OUT} \leq 750mA$	- -	- -	100 50	mV
Quiescent Current	$I_Q$	$I_{OUT} \leq 1.0A$	-	-	8	mA
Quiescent Current Change	$\Delta I_Q$	$5.0mA \leq I_{OUT} \leq 1.5A$ $7V \leq V_{IN} \leq 25V$	- -	- -	0.5 1.3	mA
Dropout Voltage	$V_D$	$I_{OUT} = 1.0A$	-	2	-	V
Peak Output Current	$I_{PK}$		1.7	-	-	A

**TO-252 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0177	0.0217	0.45	0.55	G	0.0866	0.1102	2.20	2.80
B	0.0650	0.0768	1.65	1.95	H	-	*0.0906	-	*2.30
C	0.0354	0.0591	0.90	1.50	I	-	0.0354	-	0.90
D	0.0177	0.0236	0.45	0.60	J	-	0.0315	-	0.80
E	0.2520	0.2677	6.40	6.80	K	0.2047	0.2165	5.20	5.50
F	0.2125	0.2283	5.40	5.80	L	0.0551	0.0630	1.40	1.60

**Notes:** 1.Controlling dimension: millimeters.  
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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