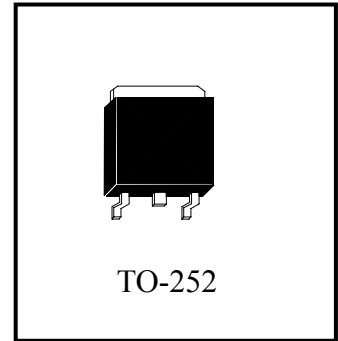


Three Terminal Positive Voltage Regulators

PL78D05XJ3

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_{IN}	35	V
Output Current	I_o	1	A
Power Dissipation	P_D	15	W
Operating Junction Temperature Range	T_J	0 to +125	°C

Ordering Information

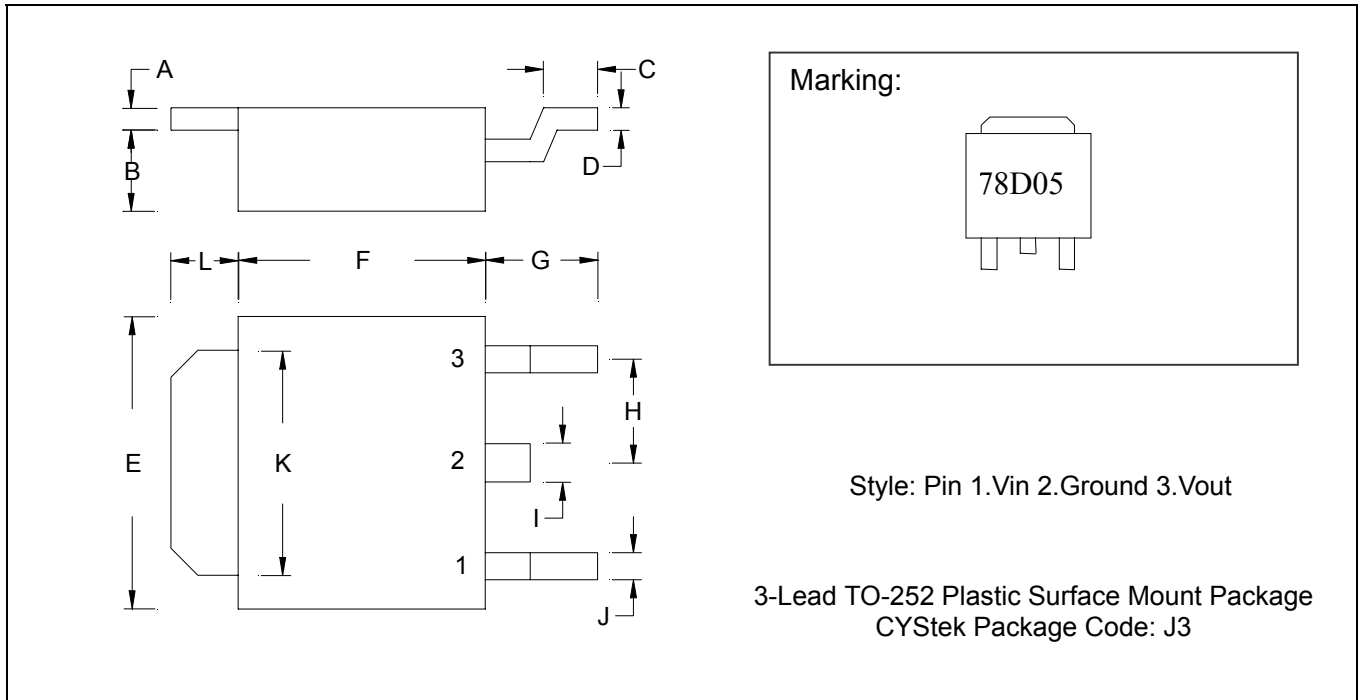
Device	Output Voltage Tolerance	Package
PL78D05AJ3	3%	TO-252
PL78D05BJ3	5%	TO-252



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 PL78D05A PL78D05B	V_o		4.85 4.75	5.0 5.0	5.15 5.25	V
Output Voltage PL78D05A PL78D05B	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	ΔV_o	$7V \leq V_{IN} \leq 25V$ $8V \leq V_{IN} \leq 25V$	- -	- -	50 25	mV
Load Regulation	ΔV_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	ΔI_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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