Description

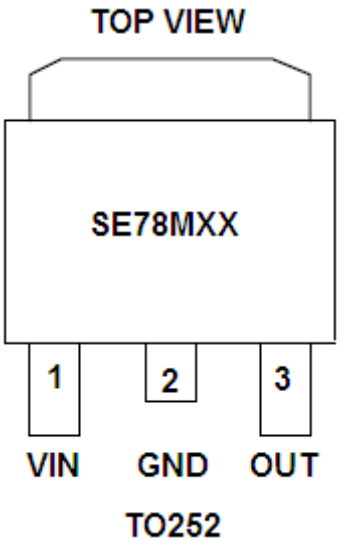
The SE78MXX is monolithic fixed voltage regulator integrated circuit .It is suitable for applications that required the output current up to 500mA .

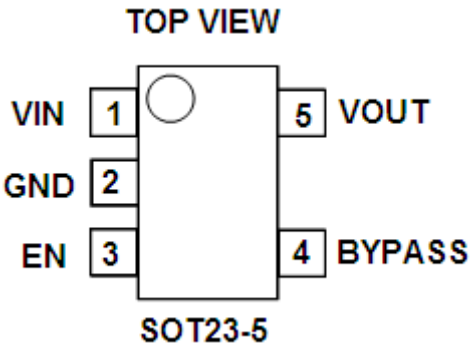
This fixed voltage regulators can provide local or on-card regulation for elimination of noise and distribution problems associated with single point regulation.

Features

- Fixed Output voltage of 3.3V，5V，8.0V，9.0V available
- Output current up to 500mA
- Minimum external components.
- Output voltage tolerances of ±4%
- Thermal overload shutdown protection
- Short circuit current limiting
- ESD rating is 2KV (Per MIL-STD-883D).

Pin Configuration

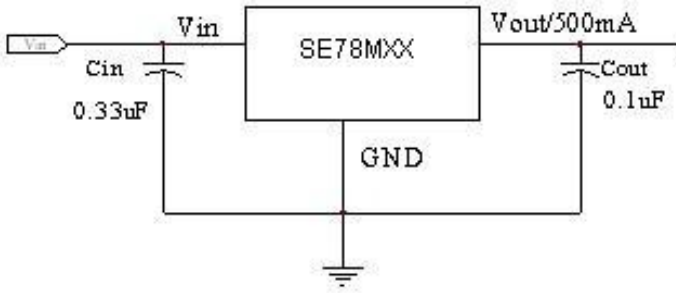




Application

- Sound card on PC main board.
- DVD-ROM, CD-ROM.
- Networking Equipments.

Application Circuit



Absolute Maximum Rating

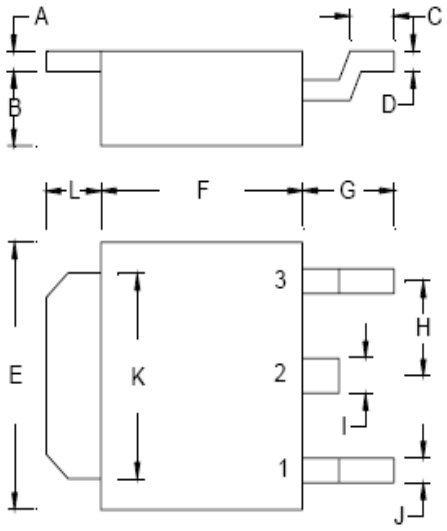
Parameter	Symbol	Maximum	Units
Input Voltage	V_{IN}	36	V
Output current	Io	500	mA
Operating Junction Temperature Range	T_J	0 to +125	°C
Lead Temperature (Soldering) 10 seconds	T_{LEAD}	260	°C
Power dissipation(note 1)	P_D	Internal Limited	W
Storage Temperature	T_{STG}	-65 to +150	°C
ESD (HBM) Susceptibility	V_{ESD}	2	KV
Thermal Resistance, Junction-to-Ambient	θ (JA)	250(SOT23-5)	°C/W
		92(TO-252)	

Electrical Characteristics

V_{IN} = Vout+5.0V; C_{IN} = 0.33μF,Cout=0.1uF; T_J = 25°C; unless otherwise specified

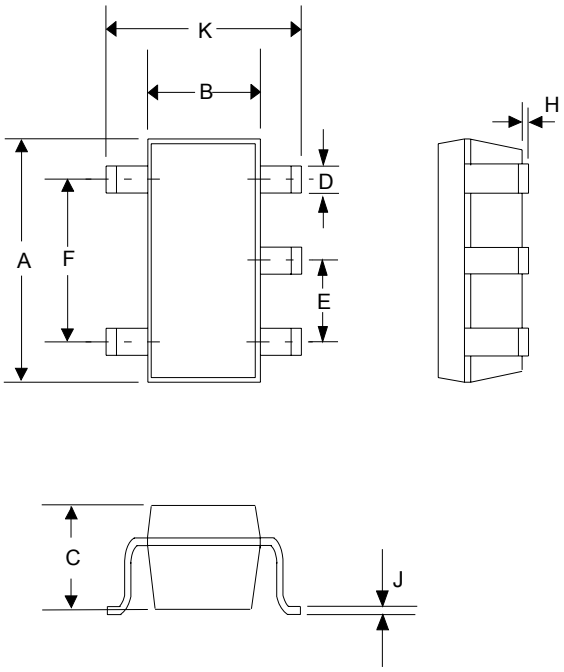
Symbol	Parameter	Conditions	SE78M05			Unit
			Min	Typ	Max	
V_O	Output Voltage	Iout=10mA	3.201	3.3	3.399	V
			4.80	5.0	5.20	
			7.68	8.0	8.32	
			8.64	9.0	9.36	
ΔV_O	Line Regulation	(Vout+3V) ≤ V_{IN} ≤ 36V; Iout=1mA	--	0.03%		mV/V
ΔV_O	Load Regulation	1mA ≤ I_O ≤ 500mA	--	0.005%		mV/mA
I_Q	Quiescent Current	Io =10mA	--	4		mA
ΔI_Q	Quiescent Current Change	8V ≤ V_{IN} ≤ 18V	--	1	--	
		5mA ≤ I_O ≤ 500mA	--	0.5	--	
RR	Ripple Rejection	f =120Hz, C_{IN}=C_{OUT}=0.33uF	--	65	--	dB
I_{PK}	Peak Output Current			1.0	--	A
$\Delta V_O/\Delta T$	Temperature coefficient of Vo	I_O = 10mA	--	0.20	--	mV/°C
Vd	Dropout voltage	T_j=25°C		2.0		V
V_N	Output Noise Voltage	10Hz<f<100KHz		70		uV

Outline Drawing TO252



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.0177	0.0217	0.45	0.55
B	0.065	0.065	1.65	1.65
C	0.0354	0.0354	0.90	0.90
D	0.0177	0.0236	0.45	0.60
E	0.252	0.02677	6.41	0.68
F	0.2125	0.2283	5.41	5.80
G	0.0866	0.1102	2.20	2.80
H	-	0.0906	-	2.30
I	-	0.0354	-	0.90
J	-	0.0315	-	0.80
K	0.2047	0.2165	5.21	5.50
L	0.0551	0.063	1.40	1.60

Outline Drawing SOT23-5L



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.110	0.120	2.80	3.05
B	0.059	0.070	1.50	1.75
C	0.036	0.051	0.90	1.30
D	0.014	0.020	0.35	0.50
E	-	0.037	-	0.95
F	-	0.075	-	1.90
H	-	0.006	-	0.15
J	0.0035	0.008	0.090	0.20
K	0.102	0.118	2.60	3.00

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