



Description

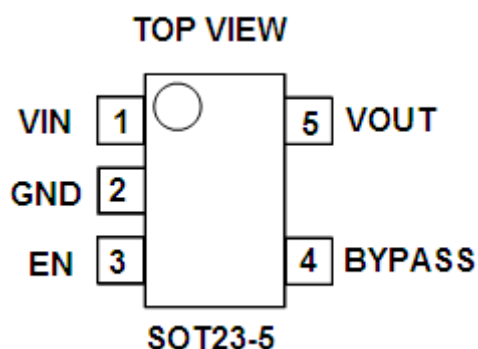
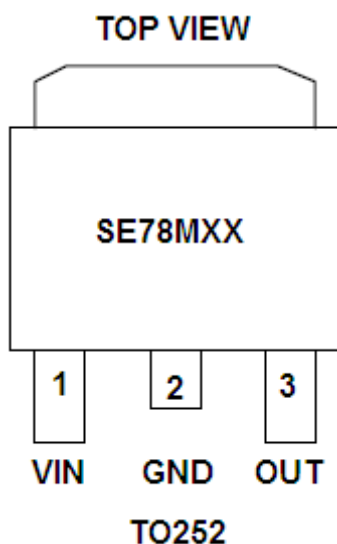
The SE78MXX is monolithic fixed voltage regulator integrated circuit. It is suitable for applications that required the output current up to 500mA.

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 $\pm 4\%$
- Thermal overload shutdown protection
- Short circuit current limiting
- ESD rating is 2KV (Per MIL-STD-883D).

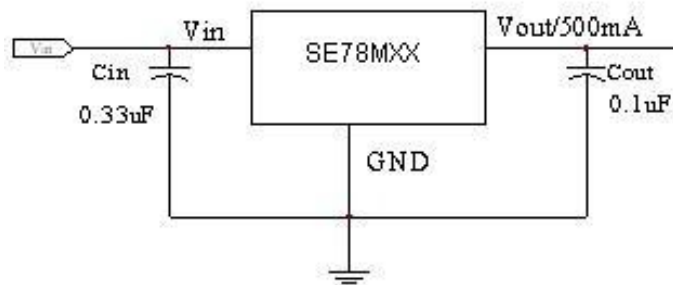
Pin Configuration



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	I_O	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)	

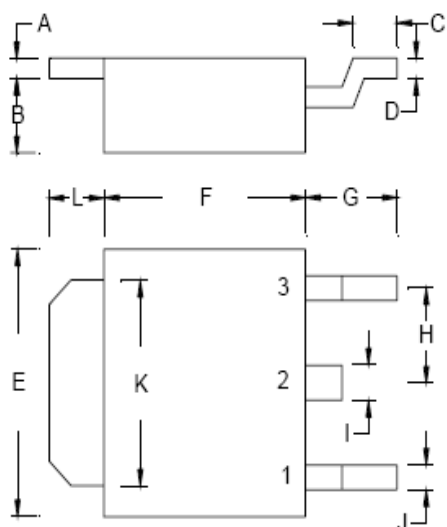
Electrical Characteristics

$V_{IN} = V_{out} + 5.0V$; $C_{IN} = 0.33\mu F$; $C_{out} = 0.1\mu F$; $T_J = 25^\circ C$; unless otherwise specified

Symbol	Parameter	Conditions	SE78M05			Unit
			Min	Typ	Max	
V_O	Output Voltage	$I_{out} = 10mA$	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	$(V_{out} + 3V) \leq V_{IN} \leq 36V$; $I_{out} = 1mA$	--	0.03%		mV/V
ΔV_O	Load Regulation	$1mA \leq I_O \leq 500mA$	--	0.005%		mV/mA
I_Q	Quiescent Current	$I_O = 10mA$	--	4		mA
ΔI_Q	Quiescent Current Change	$8V \leq V_{IN} \leq 18V$	--	1	--	
		$5mA \leq I_O \leq 500mA$	--	0.5	--	
RR	Ripple Rejection	$f = 120Hz$, $C_{IN} = C_{OUT} = 0.33\mu F$	--	65	--	dB
I_{PK}	Peak Output Current			1.0	--	A
$\Delta V_O / \Delta T$	Temperature coefficient of V_O	$I_O = 10mA$	--	0.20	--	mV/°C
V_d	Dropout voltage	$T_J = 25^\circ C$		2.0		V
V_N	Output Noise Voltage	$10Hz < f < 100KHz$		70		uV

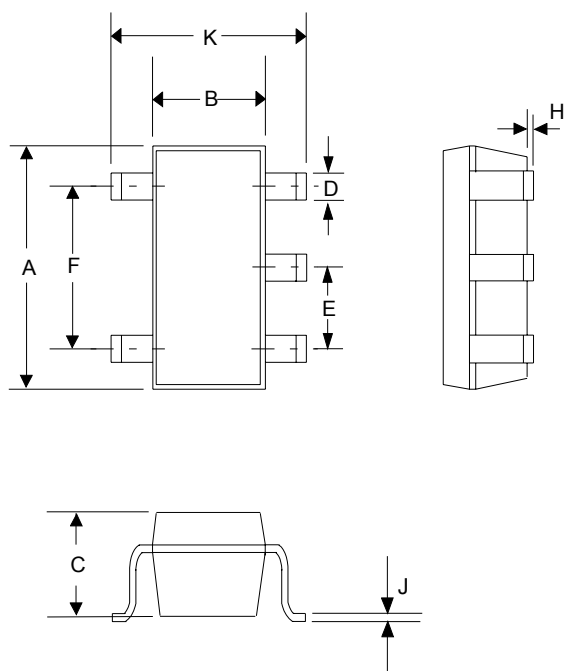


Outline Drawing TO252



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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