Ordering number: EN1527C

Monolithic Linear IC

SANYO No.1527C

LA5540

Motor Driver with Regulator, Brake

Features

- Regulated power supply for motor drive
- On-chip brake circuit
- Small-sized package and minimum number of external parts required

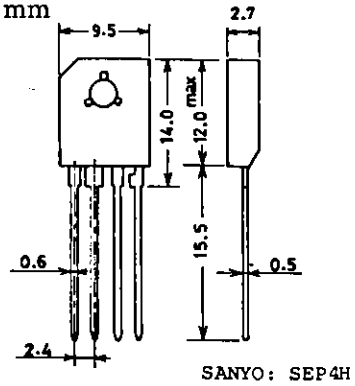
Maximum Ratings/T_a=25°C				unit
Maximum Input Voltage	V_{IN} max		20	V
Maximum Output Current	I_O max	V_{IN}=10V, Duty≦6% T_{ON}=20ms	2.0	A
Allowable Power Dissipation	P_d max		1.2	W
Operating Temperature	T_{opr}		−20 to +80	°C
Storage Temperature	T_{stg}		−30 to +125	°C

Operating Conditions/T_a=25°C			unit
Input Voltage	V_{IN}	−0.3 to +20	V
MT "H" Level	$V_{MT(H)}$	3 to 20	V
MT "L" Level	$V_{MT(L)}$	−0.3 to +0.7	V

Operating Characteristics/T_a=25°C, V_{IN}=9V, I_O=200mA, C_O=1μF			Test circuit	min	typ	max	unit
Output Voltage	V_O		1	5.2	5.6	6.0	V
Line Regulation	$\Delta V_{O\ LINE}$	7.5V<V_{IN}<20V	2			100	mV
Load Regulation	$\Delta V_{O\ LOAD}$	10mA<I_O<1.0A	3			100	mV
Quiescent Current	$I_{CC\ ON}$	V_{MT}=3V	4		1.6	3.0	mA
	$I_{CC\ OFF}$	V_{MT}=0V	4		0.3	0.6	mA
Input-Output Voltage Diff		ΔV_O=5%	5			1.0	V
MT Input Current	I_{MT}	V_{MT}=6V	6	0.3	0.5	0.9	mA
Brake Residual Voltage	V_{SAT1}	I_O=−500mA	7			1.2	V
	V_{SAT2}	I_O=−800mA	7			1.4	V

Package Dimensions 3027A

unit : mm



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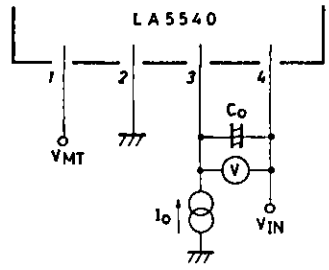
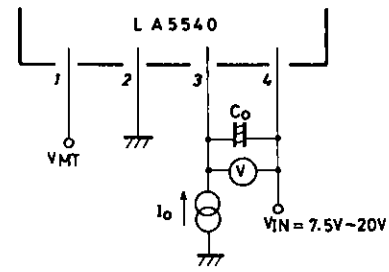
Test circuits

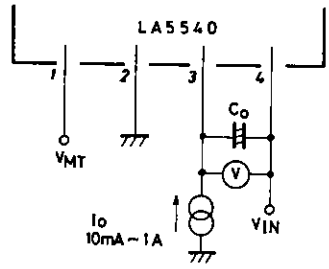
1. Output Voltage V_O



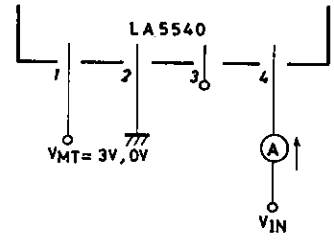
2. Line Regulation ΔV_O LINE



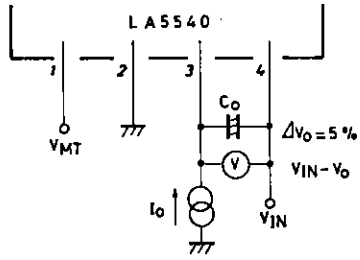
3. Load Regulation ΔV_O LOAD



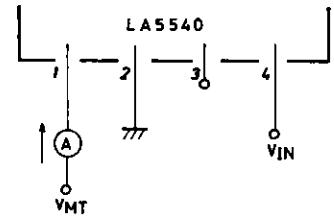
4. Quiescent Current I_{CC} ON, I_{CC} OFF



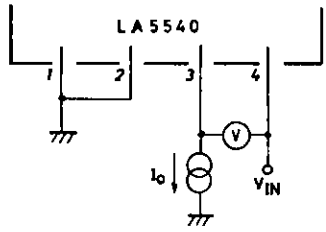
5. Input-Output Voltage Diff



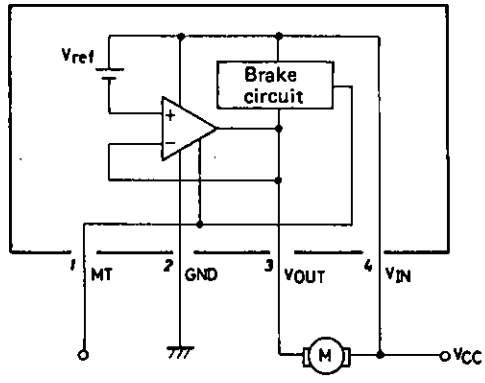
6. MT Input Current I_{MT}



7. Brake Residual Voltage V_{SAT}



Block Diagram and Sample Application Circuit



MT	V_O	Remarks
H	5.6V typ	Regulator
L	0V	Brake