

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/ $T_a=25^\circ\text{C}$

			unit
Maximum Input Voltage	V_{IN} max	20	V
Maximum Output Current	I_O max	$V_{IN}=10\text{V}$, Duty $\leq 6\%$ $T_{ON}=20\text{ms}$	2.0 A
Allowable Power Dissipation	P_d max	1.2	W
Operating Temperature	T_{opr}	-20 to +80	$^\circ\text{C}$
Storage Temperature	T_{stg}	-30 to +125	$^\circ\text{C}$

Operating Conditions/ $T_a=25^\circ\text{C}$

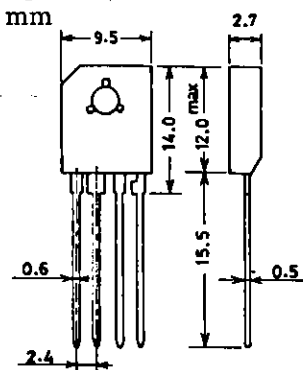
			unit
Input Voltage	V_{IN}	-0.3 to +20	V
MT "H" Level	$V_{MT(H)}$	3 to 20	V
MT "L" Level	$V_{MT(L)}$	-0.3 to +0.7	V

Operating Characteristics/ $T_a=25^\circ\text{C}$, $V_{IN}=9\text{V}$, $I_O=200\text{mA}$, $C_O=1\mu\text{F}$

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

Package Dimensions 3027A

unit: mm



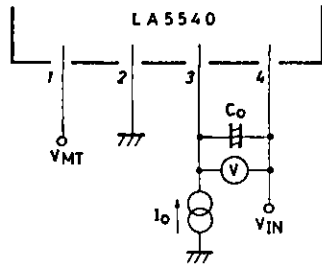
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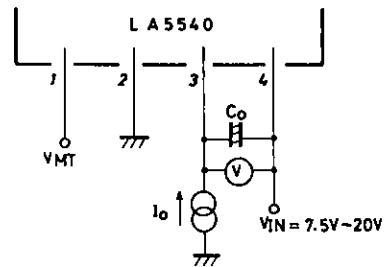
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Test circuits

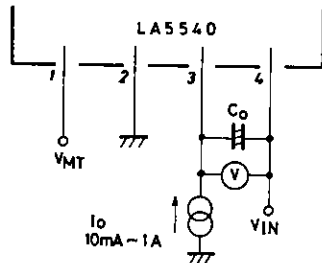
1. Output Voltage V_O



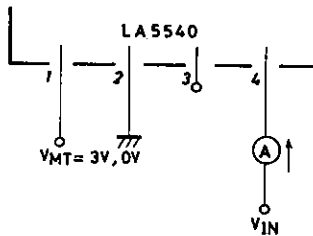
2. Line Regulation ΔV_O LINE



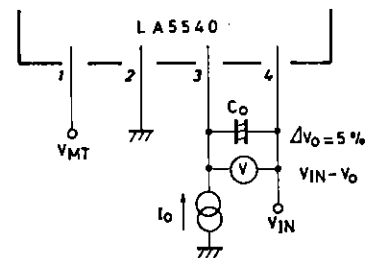
3. Load Regulation ΔV_O LOAD



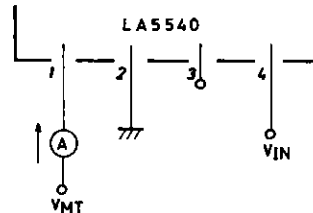
4. Quiescent Current I_{CC} ON, I_{CC} OFF



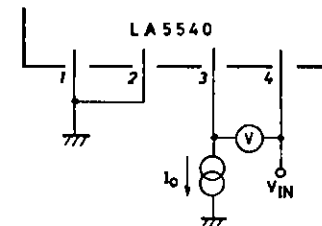
5. Input-Output Voltage Diff



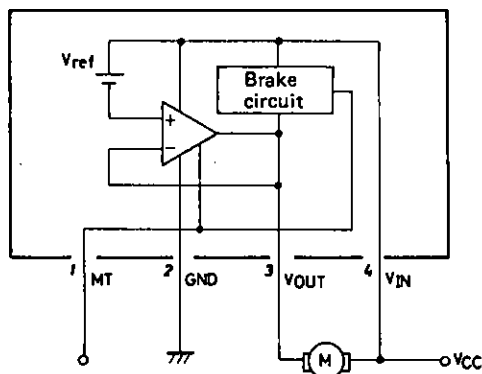
6. MT Input Current I_{MT}



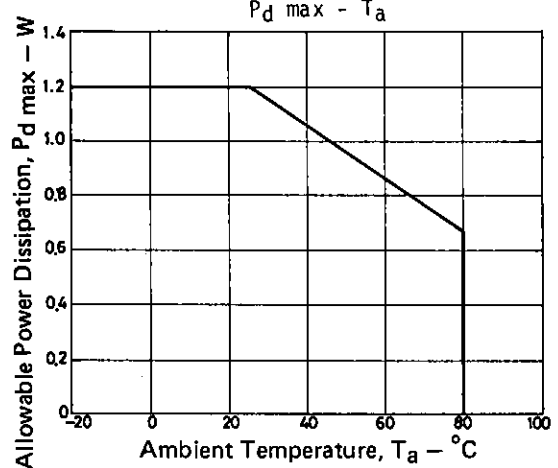
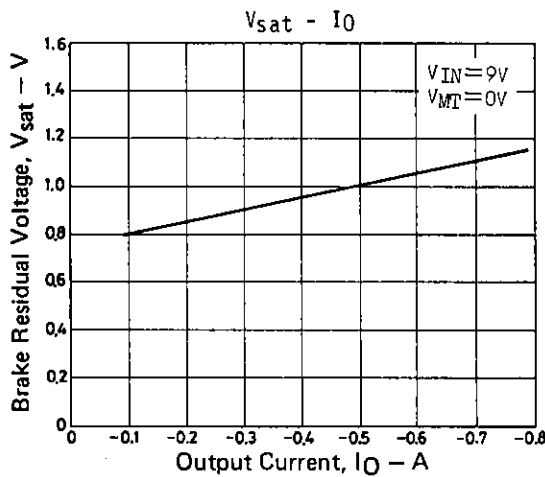
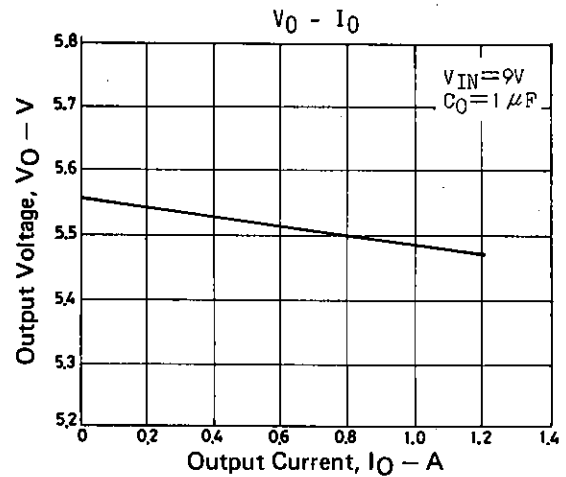
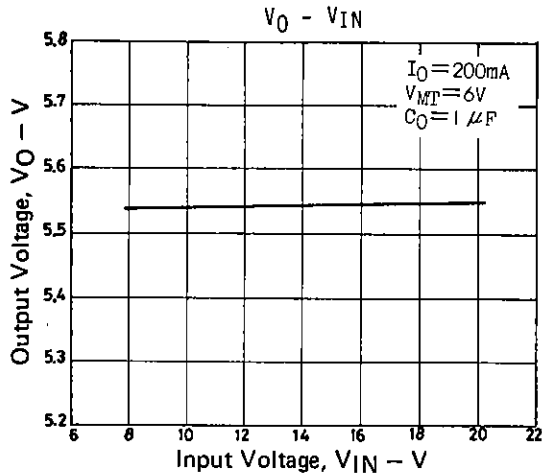
7. Brake Residual Voltage V_{SAT}



Block Diagram and Sample Application Circuit



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



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