

■ Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Rating		Unit
Supply Voltage	AN6650	V _{CC}	7.5		V
	AN6650S		4		
Circuit Voltage	AN6650	V _{n-5,6} (n = 1, 2, 3, 4)	-0.5	7.5	V
	AN6650S		-0.5	4	
Circuit Voltage		V _{8-5,6}	-0.5	1	V
Supply Current		I _{CC} *	1000		mA
Circuit Current		I ₇	-	1000	mA
Power Dissipation	AN6650	P _D	750		mW
	AN6650S		360		
Operating Ambient Temperature	AN6650	Topr	-20 ~ +75		°C
	AN6650S		-20 ~ +60		
Storage Temperature	AN6650	Tstg	-40 ~ +150		°C
	AN6650S		-40 ~ +125		

* AN6650: t ≤ 5s, AN6650S: t ≤ 1s
Operating Supply Voltage Range (AN6650): V_{CC} = 1.8V ~ 7.0V
Operating Supply Voltage Range (AN6650S): V_{CC} = 1.8V ~ 3.6V

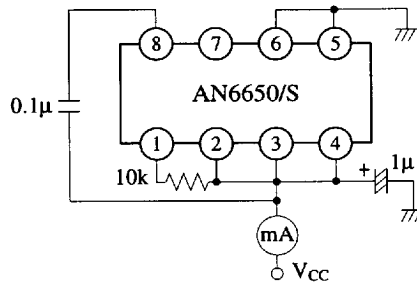
■ Electrical Characteristics (Ta=25°C)

Item		Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Supply Current		I _{CC}	1	V _{CC} = 3V		2	3	mA
Reference Voltage		V _{REF}	4	V _{CC} = 3V, R ₂₋₁ > 10kΩ	1.20	1.28	1.35	V
Starting Voltage		V _{CC(S)}	2	Supply voltage in which 30mA current flows to R _a		1.0	1.2	V
Saturation Voltage		V _{sat}	2	V _{CC} = 1.8V, R _a = 4.7Ω		0.2	0.5	V
Voltage Characteristics 1	AN6650	$\frac{\Delta V_{REF}}{V_{REF}} / \Delta V_{CC}$	1	V _{CC} = 1.8 ~ 7V, V _{CC} = 1.8 ~ 3.6V	-1.25	0.1	1.25	%/V
	AN6650S							
Voltage Characteristics 2	AN6650	$\frac{\Delta V_a}{V_a} / \Delta V_{CC}$	3	V _{CC} = 1.8 ~ 7V, V _{CC} = 1.8 ~ 3.6V	-1.2	0.1	1.2	%/V
	AN6650S							
Current Characteristics		$\frac{\Delta V_{REF}}{V_{REF}} / \Delta I_7$	4	I ₇ = 1mA ~ 20mA	-0.2	0.01	0.2	%/mA
Temperature current Characteristics		$\frac{\Delta V_{REF}}{V_{REF}} / \Delta T_a$	4	V _{CC} = 3V Ta = -20°C ~ 60°C		0.01		%/°C

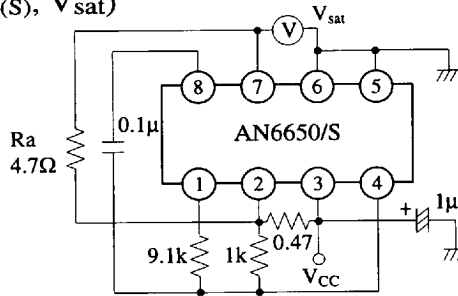
■ Pin

Pin No	Pin Name	Pin No	Pin Name
1	V _{REF} ⊖	5	GND
2	V _{REF} ⊕	6	GND
3	V _{CC}	7	Motor Pin
4	Comparator Input	8	Phase Compensation

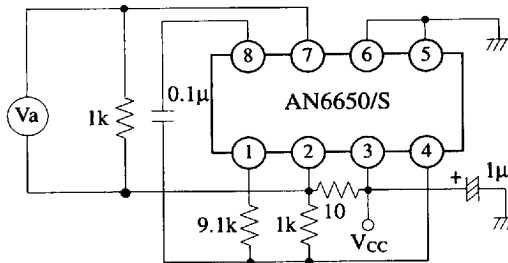
Test Circuit 1 (I_{CC} , $\frac{\Delta V_{REF}}{V_{REF}}/\Delta V_{CC}$)



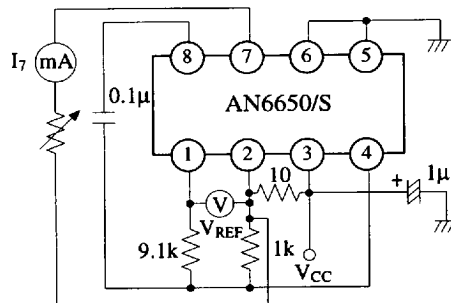
Test Circuit 2 ($V_{CC(S)}$, V_{sat})



Test Circuit 3 ($\frac{\Delta V_a}{V_a}/\Delta V_{CC}$)

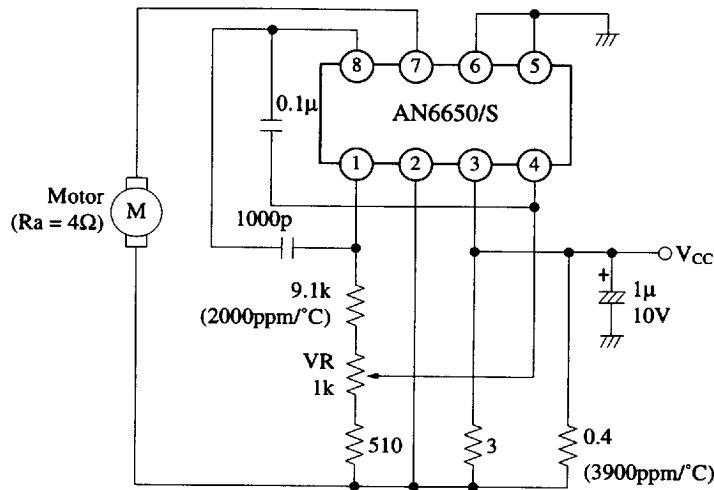


Test Circuit 4 ($\frac{\Delta V_{REF}}{V_{REF}}/\Delta I_7$, $\frac{\Delta V_{REF}}{V_{REF}}/\Delta T_a$)



■ Application Circuit

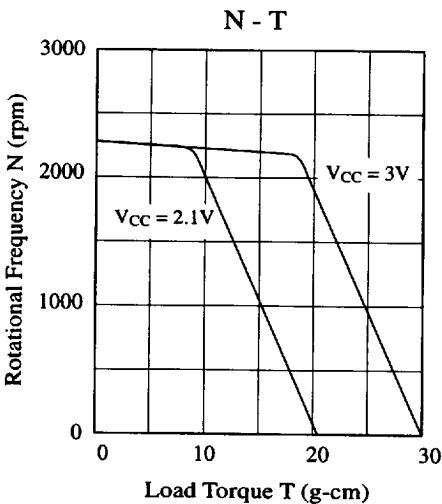
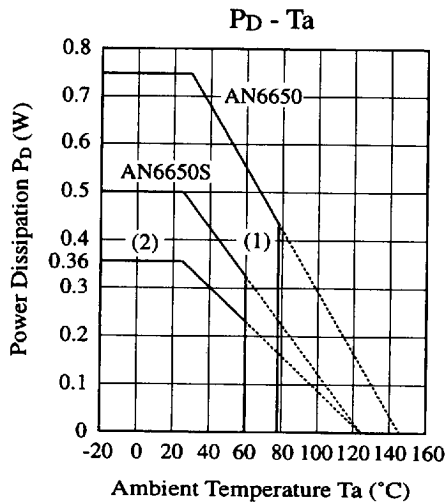
Speed Control Circuit with 3V Core Motor



Motor Constants

- Ra : Internal resistor = 4Ω
- Ka : Electromotive force constant = 0.4mV/rpm
- KT : Torque constant = 30g.cm/A

■ Characteristics Curve



- In case of AN6650S
- (1) Epoxy substrate mounted (55mm x 20mm x 0.7mm)
 - (2) Single unit.