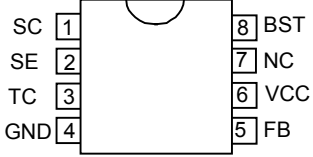


ORDERING INFORMATION

AIC1562 XX

PACKAGE TYPE
 N: PLASTIC DIP
 S: SMALL OUTLINE

 TEMPERATURE
 C: 0°C~+70°C

ORDER NUMBER	PIN CONFIGURATION
AIC1562CN (PLASTIC DIP)	TOP VIEW 
AIC1562CS (PLASTIC SO)	

ABSOLUTE MAXIMUM RATINGS

Supply Voltage 20V
 Comparator Input Voltage Range -0.3V~20V
 Switch Collector Voltage 20V
 Switch Emitter Voltage 20V
 Switch Collector to Emitter Voltage 20V
 Driver Collector Voltage 20V
 Switch Current 1A
 Power Dissipation and Thermal Characteristics

DIP Package

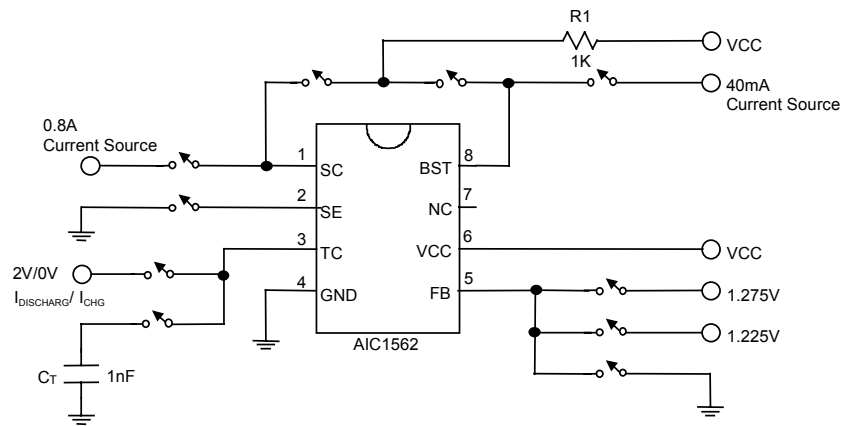
Ta= 25°C 1.0W
 Thermal Resistance 100°C/W

SO Package

Ta= 25°C 625mW
 Thermal Resistance 160°C/W

Operating Junction Temperature 125°C
 Operating Ambient Temperature Range 0°C~70°C
 Storage Temperature Range..... - 65°C ~ 150°C

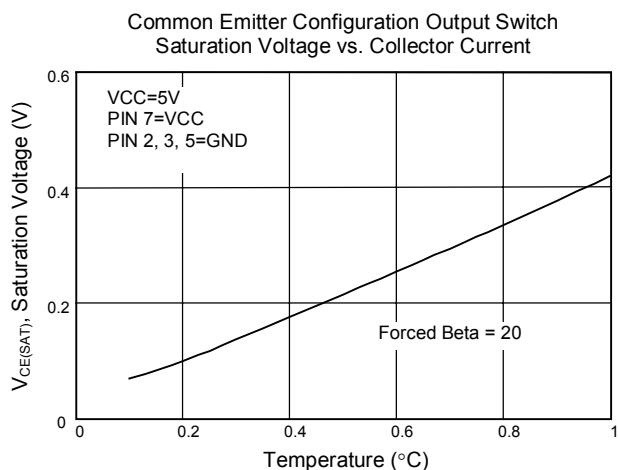
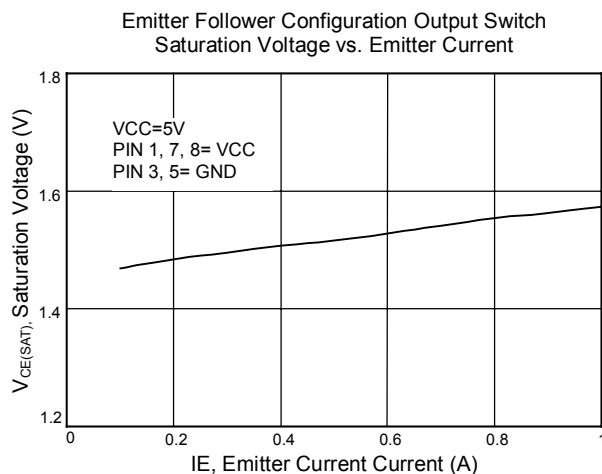
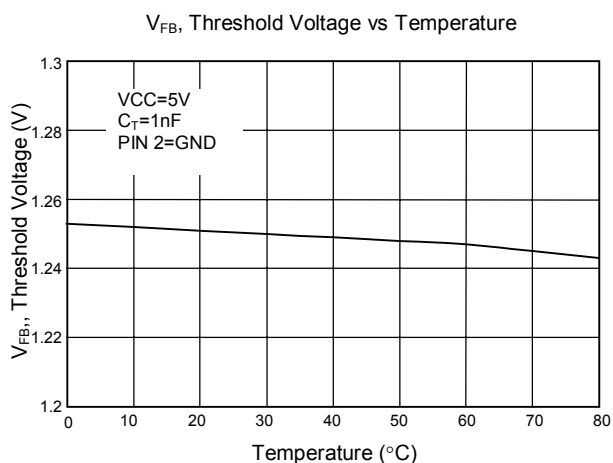
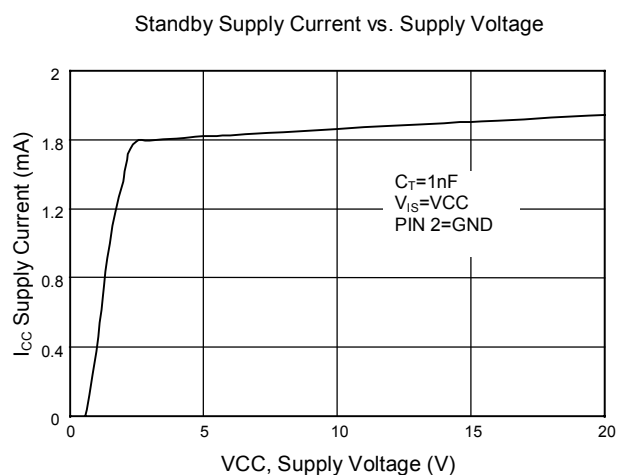
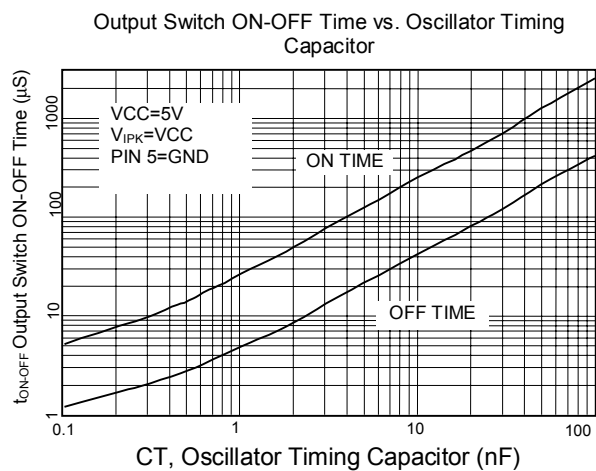
TEST CIRCUIT



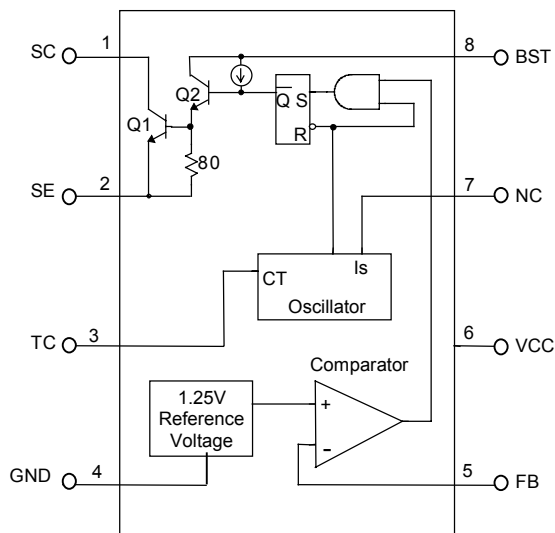
ELECTRICAL CHARACTERISTICS (VCC= 5V, Ta=25°C unless otherwise specified.)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Oscillator						
Charging Current	5.0V≤VCC≤20V	I _{CHG}	15	25	35	A
Discharge Current	5.0≤VCC≤20V	I _{DISCHG}	120	150	180	μA
Voltage Swing	PIN 3	V _{OSC}		0.6		V
Discharge to Charge Current Ratio	V _{IS} =VCC	I _{DISCHG} / I _{CHG}		6.0		
Output Switch						
Saturation Voltage, Emitter Follower Connection	I _{SE} =0.8A; V _{BST} =V _{SC} = VCC	V _{CE(SAT)}		1.6	2.0	V
Saturation Voltage	I _{SC} =0.8A; I _{BST} =40mA, (Forced ≅20)	V _{CE (SAT)}		0.5	0.8	V
DC Current Gain	I _{SC} =0.8A; V _{CE} =5.0V	h _{FE}	35	120		
Collector Off-State Current	V _{CE} =20V	I _{C(OFF)}		10		nA
Comparactor						
Threshold Voltage	Ta=25°C 0°C ≤Ta ≤70°C	V _{FB}	1.225	1.25	1.275	V
			1.21		1.29	V
Threshold Voltage Line Regulation	3.0V ≤VCC≤20V	REG _{LINE}		0.1	0.5	mV/V
Input Bias Current	V _{IN} =0V	I _{IB}		0.4	2	μA
Supply current	V _{IS} =VCC, pin 5>V _{FB} 5.0V ≤VCC≤20V C _T =1nF PIN 2=GND Remaining pins open	I _{CC}		1.6	3	mA

TYPICAL PERFORMANCE CHARACTERISTICS



■ BLOCK DIAGRAM

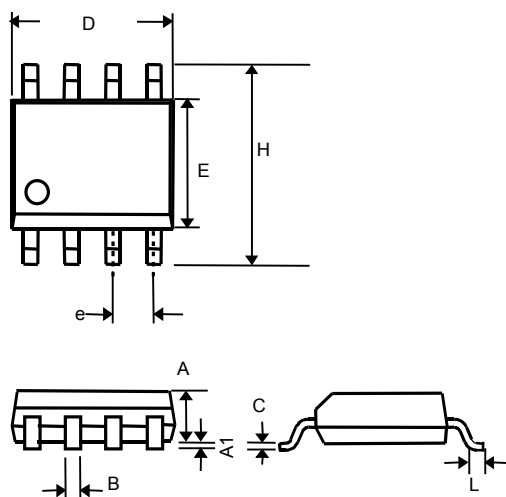


■ PIN DESCRIPTIONS

- PIN 1: SC - 0.8A switch collector.
- PIN 2: SE - Darlington switch emitter.
- PIN 3: TC - Oscillator timing capacitor.
- PIN 4: GND - Power ground.
- PIN 5: FB - Feedback comparator inverting input.
- PIN 6: VCC - Power supply input.
- PIN 7: NC -
- PIN 8: BST - Bootstrapped driver collector.

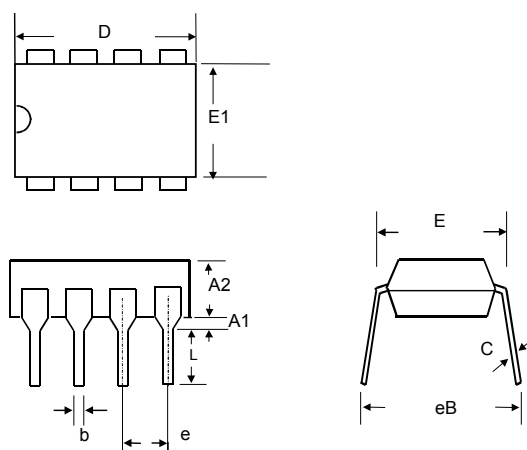
■ PHYSICAL DIMENSIONS

● 8 LEAD PLASTIC SO (unit: mm)



SYMBOL	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.33	0.51
C	0.19	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27(TYP)	
H	5.80	6.20
L	0.40	1.27

● 8 LEAD PLASTIC DIP (unit: mm)



SYMBOL	MIN	MAX
A1	0.381	—
A2	2.92	4.96
b	0.35	0.56
C	0.20	0.36
D	9.01	10.16
E	7.62	8.26
E1	6.09	7.12
e	2.54 (TYP)	
eB	—	10.92
L	2.92	3.81