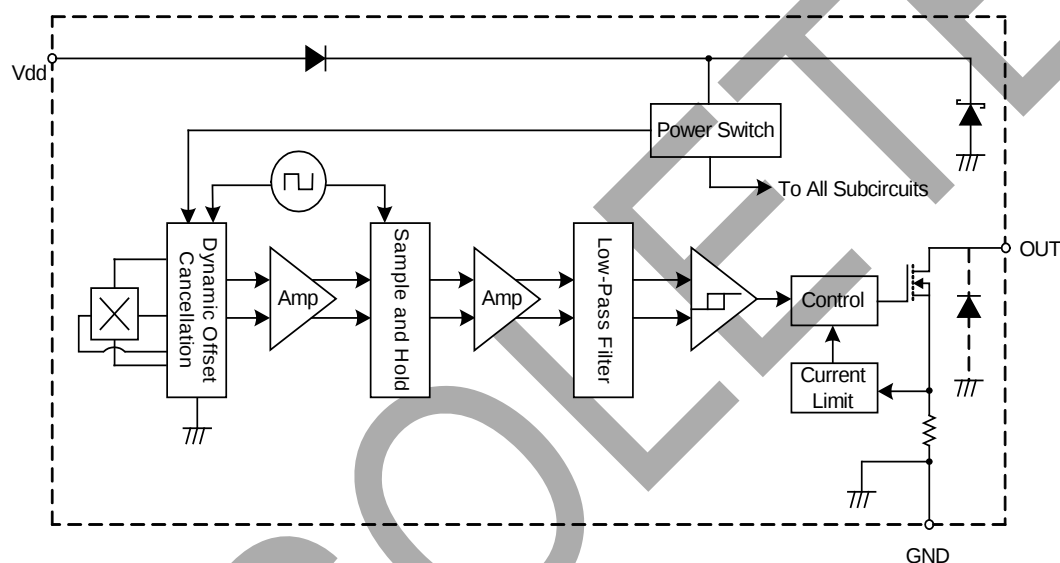


Pin Descriptions

Pin Name	P/I/O	Pin #	Description
Vdd	P	1	Positive Power Supply
GND	P	2	Ground
OUT	O	3	Output Pin

Functional Block Diagram



Absolute Maximum Ratings (T_A = +25°C)

Symbol	Characteristics		Values	Unit
V _{DD}	Supply Voltage		30	V
V _{RDD}	Reverse Battery Voltage		-30	V
B	Magnetic Flux Density		Unlimited	
V _{DS}	Output OFF Voltage		30	V
I _{O(peak)}	Output "On" Current (Peak)		100	mA
T _{ST}	Storage Temperature Range		-65 to +150	°C
T _{J(MAX)}	Maximum Junction Temperature		+150	°C
P _D	Package Power Dissipation	SIP-3 (Ammo Pack), SIP-3 (Bulk Pack)	550	mW
		SC59	230	mW
θ _{JC}	Thermal Resistance Junction to case	SIP-3 (Ammo Pack), SIP-3 (Bulk Pack)	227	°C/W
		SC59	543	°C/W

Recommended Operating Conditions

Symbol	Characteristic	Conditions	Min	Typ.	Max	Unit
V_{DD}	Supply Voltage	Operating	3	24	28	V
T_A	Operating Ambient Temperature	Operating	-40	-	+125	°C

Electrical Characteristics ($T_A = +25^\circ\text{C}$, $V_{DD} = 24\text{V}$, Note 4)

Symbol	Characteristic	Test Conditions	Min	Typ.	Max	Unit
$V_{O(SAT)}$	Output Saturation Voltage	$I_{out} = 20\text{mA}$, $B > B_{op}$	-	300	500	mV
I_{OFF}	Output Leakage Current	$V_O = 24\text{V}$, $B < B_{op}$	-	< 0.1	10	μA
I_{DD}	Supply Current	Output Open	-	4	6	mA
t_R	Output Rising Time	$R_L = 10\text{k}\Omega$, $C_L = 16\text{pF}$	-	340	-	ns
t_F	Output Falling Time	$R_L = 10\text{k}\Omega$, $C_L = 16\text{pF}$	-	20	-	ns
f_C	Chopping Frequency	-	-	300	-	kHz
I_{OM}	Output Current Limit	$B > B_{op}$ (Note 5)	50	70	90	mA
t_{ST}	Start-up time of IC	$V_{DD} > 3\text{V}$, $B > B_{op}$ (Note 6)	-	47	-	μs

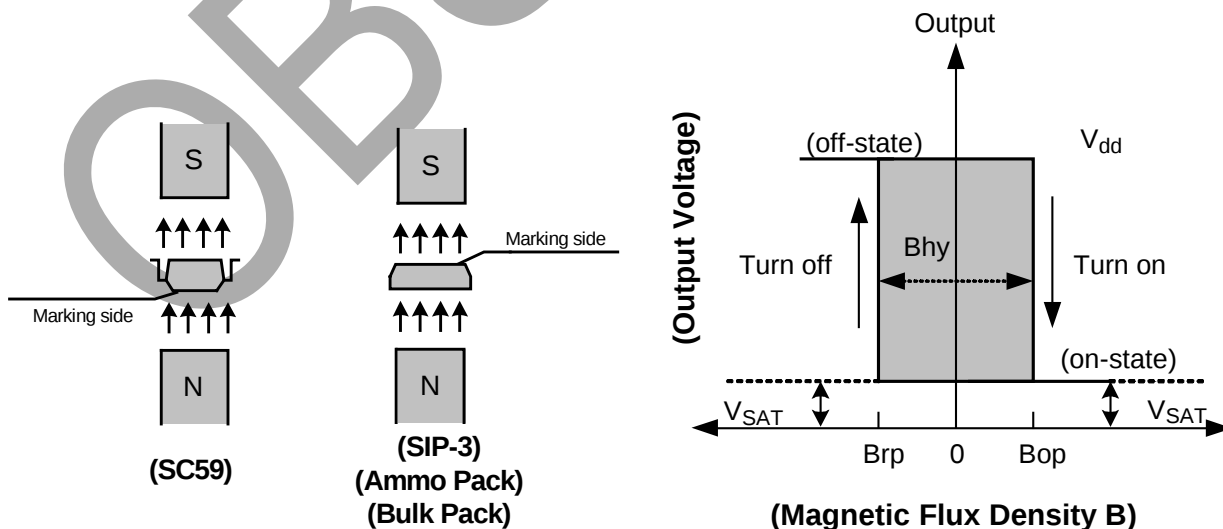
- Notes:
- Typical data is at $T_A = +25^\circ\text{C}$, $V_{DD} = 24\text{V}$ and is design information only.
 - The device will shut down operating after the output current I_O is over the output current limit I_{OM} for 160 μs (typically). The device will re-start up operating after resetting the supply voltage V_{DD} .
 - I_n initial power on time, the output state is kept in "High" in this start-up time of IC.

Magnetic Characteristics ($T_A = +25^\circ\text{C}$, $V_{DD} = 3\text{V}$ to 28V , Note 7)

(1mT=10Gauss)

Symbol	Parameter	Min	Typ.	Max	Unit
B_{op}	Operate Point	5	30	60	Gauss
B_{rp}	Release Point	-60	-30	-5	Gauss
B_{hys}	Hysteresis	-	60	-	Gauss

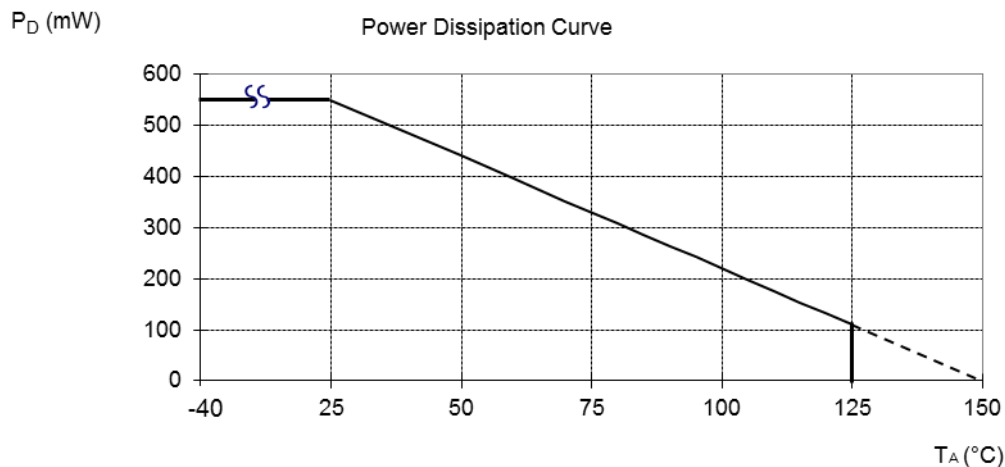
- Notes: 7. Magnetic characteristics are for design information, which will vary with supply voltage, operating temperature and after soldering.



Performance Characteristics

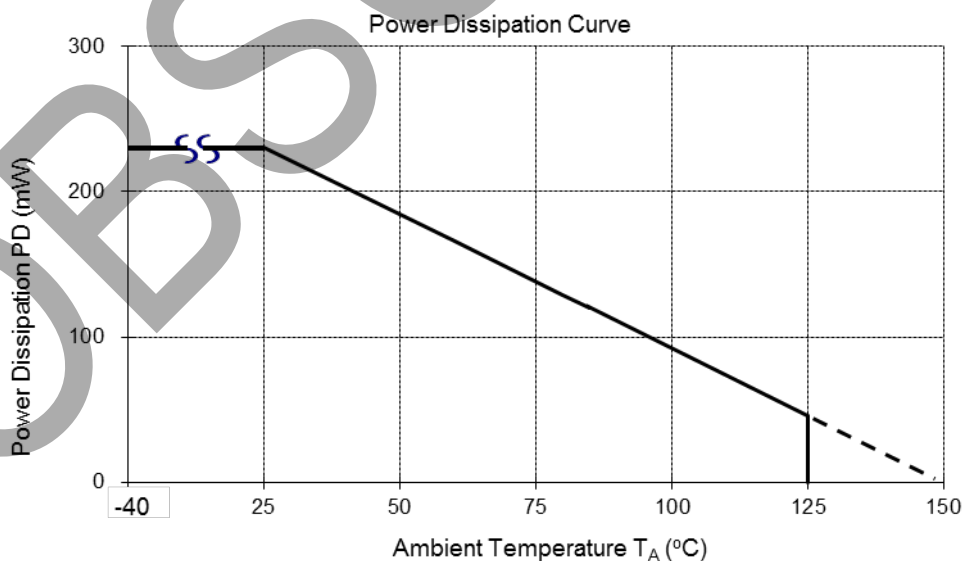
(1) SIP-3 (Ammo Pack), SIP-3 (Bulk Pack)

T_A (°C)	25	50	60	70	80	85	90	95	100
P_D (mW)	550	440	396	352	308	286	264	242	220
T_A (°C)	105	110	115	120	125	130	135	140	150
P_D (mW)	198	176	154	132	110	88	66	44	0



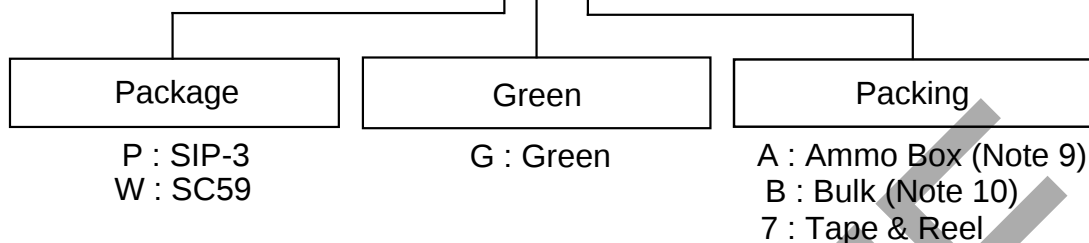
(2) SC59 (Commonly known as SOT23 in Asia)

T_A (°C)	25	50	60	70	80	90	100	110	120	125	130	140	150
P_D (mW)	230	184	166	147	129	110	92	74	55	46	37	18	0



Ordering Information

AH3761-XG-X

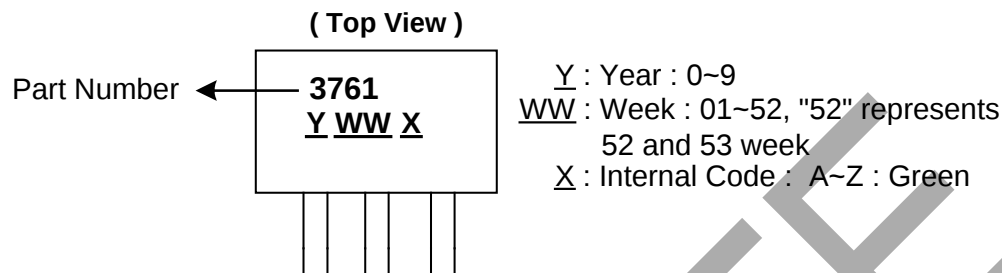


Device	Status (Note 11)	Package Code	Packaging (Note 8)	Bulk		7" Tape and Reel		Ammo Box	
				Quantity	Part Number Suffix	Quantity	Part Number Suffix	Quantity	Part Number Suffix
AH3761-PG-A	EOL	P	SIP-3(Ammo Pack)	NA	NA	NA	NA	4000/Box	-A
AH3761-PG-B	NRND	P	SIP-3(Bulk Pack)	1000	-B	NA	NA	NA	NA
AH3761-WG-7	NRND	W	SC59	NA	NA	3000/Tape & Reel	-7	NA	NA

- Notes:
8. Pad layout as shown on Diodes Incorporated's suggested pad layout document, which can be found on our website at <http://www.diodes.com/package-outlines.html>.
 9. Ammo Box is for SIP-3 Spread Lead.
 10. Bulk is for SIP-3 Straight Lead.
 11. NRND = Not Recommended for New Design.
EOL = End of Life.

Marking Information

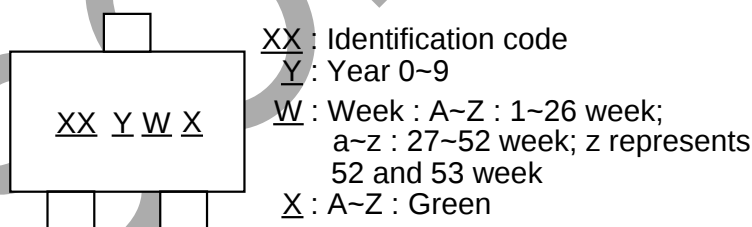
(1) Package Type: SIP-3 (Ammo Pack), SIP-3 (Bulk Pack)



Part Number	Package	Identification Code
AH3761	SIP-3 (Ammo Pack)	3761
AH3761	SIP-3 (Bulk Pack)	3761

(2) Package Type: SC59

(Top View)

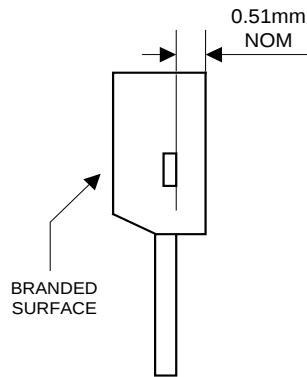


Part Number	Package	Identification Code
AH3761	SC59	P8

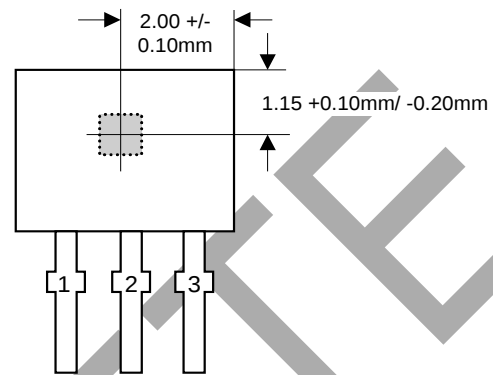
Package Outline Dimensions (All Dimensions in mm)

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

(1) Package Type: SIP-3 (Bulk Pack)

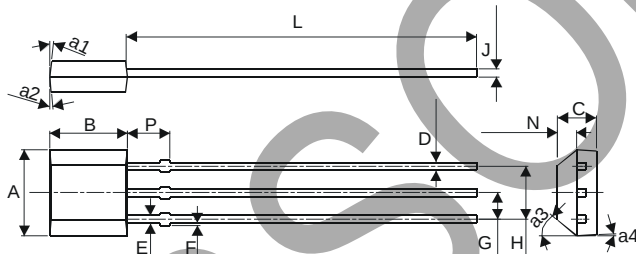


Active Area Depth



Sensor Location

Package Dimension

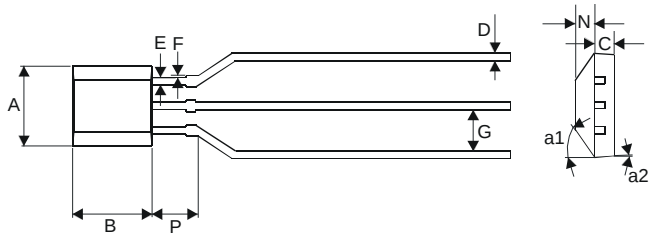


SIP-3 (Bulk Pack)		
Dim	Min	Max
A	3.9	4.3
a1	5	Typ
a2	5	Typ
a3	45	Typ
a4	3	Typ
B	2.8	3.2
C	1.40	1.60
D	0.33	0.432
E	0.40	0.508
F	0	0.2
G	1.24	1.30
H	2.51	2.57
J	0.35	0.43
L	14.0	15.0
N	0.63	0.84
P	1.55	-
All Dimensions in mm		

Package Outline Dimensions (Cont.)

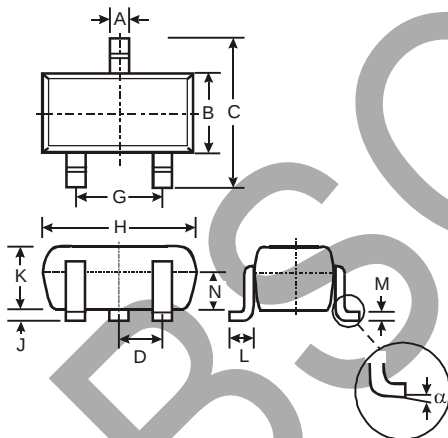
Please see <http://www.diodes.com/package-outlines.html> for the latest version.

(2) Package Type: SIP-3 (Ammo Pack)

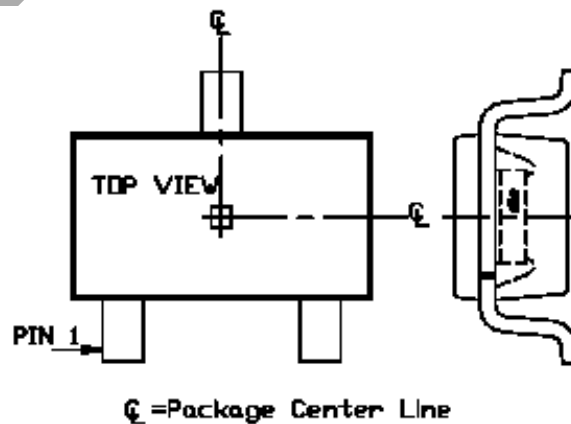


SIP-3 (Ammo Pack)			
Dim	Min	Max	
A	3.9	4.3	
a1	45		□ Ty
a2	3		□ Ty
B	2.8	3.2	
C	1.40	1.60	
□	0.35	0.41	
E	0.43	0.48	
F	0	0.2	
G	2.4	2.9	
N	0.63	0.84	
P	1.55	-	
All Dimensions in mm			

(3) Package Type: SC59



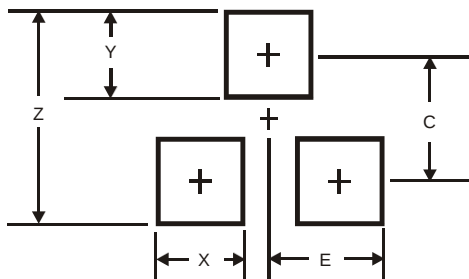
SC59			
Dim	Min	Max	Typ
A	0.35	0.50	0.38
B	1.50	1.70	1.60
C	2.70	3.00	2.80
D	-	-	0.95
G	-	-	1.90
H	2.90	3.10	3.00
J	0.013	0.10	0.05
K	1.00	1.30	1.10
L	0.35	0.55	0.40
M	0.10	0.20	0.15
N	0.70	0.80	0.75
□	0°	8°	-
All Dimensions in mm			



Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

(1) Package Type: SC59



Dimensions	Value (in mm)
Z	3.4
X	0.8
Y	1.0
C	2.4
E	1.35

OBSOLETE - PART DISCONTINUED

OBSOLETE

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