

## ■ General Description

The AME8818 is a CMOS linear regulator. It operated from 2.5V to 5.5V input voltage and delivers up to 300mA output current. The AME8818 provide low quiescent current (70 $\mu$ A typ) low dropout voltage (230mV @ 300mA typ), and excellent PSRR, thus marking them ideal for Data-Communications and battery applications.

The AME8818 provide over temperature and over current protected functions. It is stable with an output capacitance of 1 $\mu$ F or larger.

## ■ Features

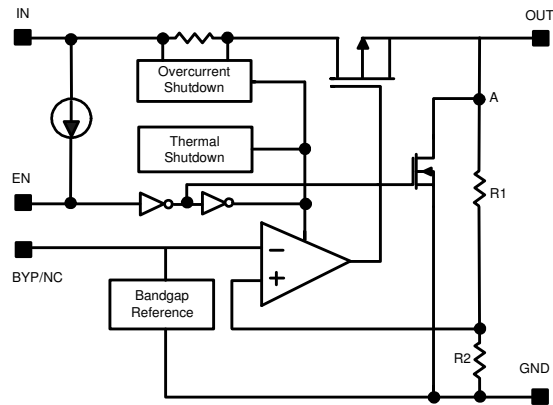
- Input voltage range is from 2.5V to 5.5V
- Output Voltage Range:
  - Fixed Version is from 1.2V to 4.5V
  - ADJ Version is from 0.98V to 4.5V
- Low Dropout: 230mV @ 300mA
- Guaranteed 300mA Drive Current
- Factory Pre-set output voltage
- Only 1 $\mu$ F Output Capacitor Required for Stability
- Provided OTP, current limit
- Green Products Meet RoHS Standards

## ■ Applications

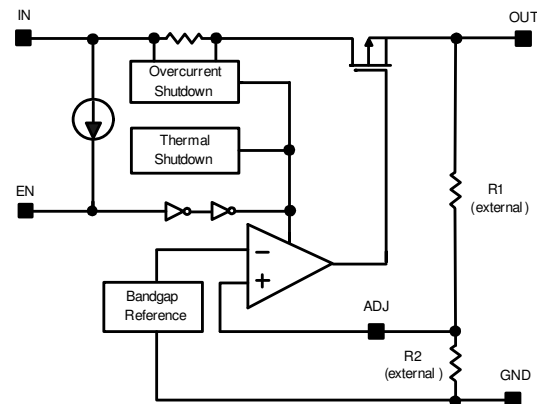
- Data-Communication
- Laptop, Palmtops, Notebook computers
- Battery Power Equipment
- Handheld Device
- PCMCIA Cards

## ■ Functional Block Diagram

### (Fixed Version)



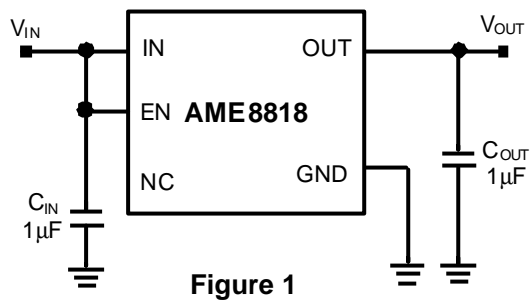
### (Adjustable Version)



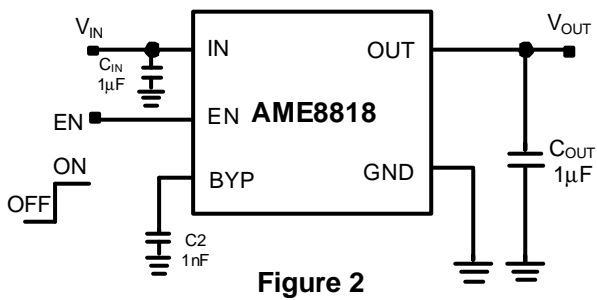
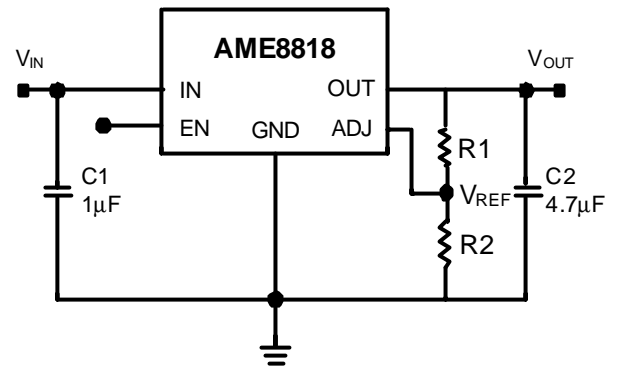
## AME8818

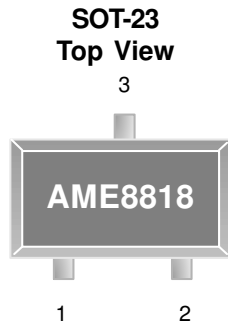
### ■ Typical Application

(Fixed Version)



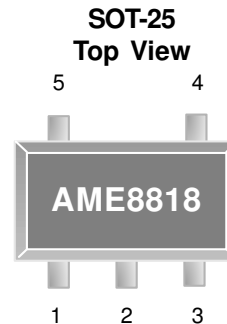
(Adjustable Version)



**■ Pin Configuration**


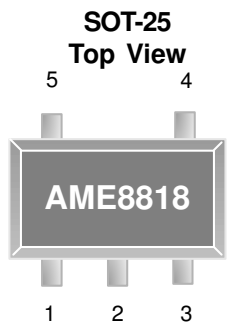
- AME8818AEET**
1. GND
  2. OUT
  3. IN

**Die Attach:  
Non-Conductive Epoxy**



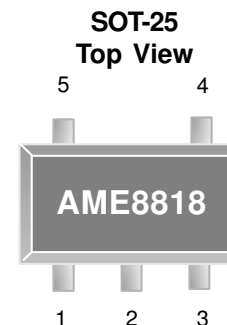
- AME8818AEEV**
1. IN
  2. GND
  3. EN
  4. BYP
  5. OUT

**Die Attach:  
Conductive Epoxy**



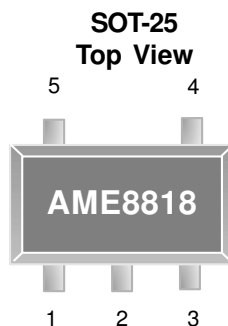
- AME8818BEEV**
1. IN
  2. GND
  3. EN
  4. NC
  5. OUT

**Die Attach:  
Conductive Epoxy**



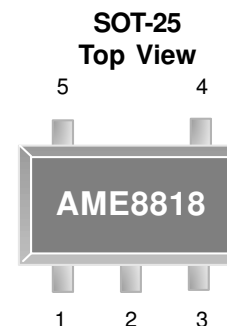
- AME8818CEEV**
1. EN
  2. GND
  3. IN
  4. OUT
  5. NC

**Die Attach:  
Conductive Epoxy**



- AME8818DEEV**
1. IN
  2. GND
  3. EN
  4. ADJ
  5. OUT

**Die Attach:  
Conductive Epoxy**

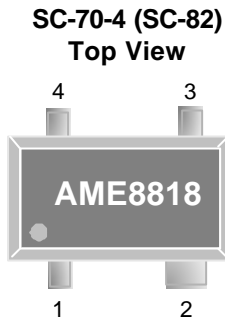


- AME8818EEEV**
1. EN
  2. GND
  3. IN
  4. OUT
  5. ADJ

**Die Attach:  
Conductive Epoxy**

## AME8818

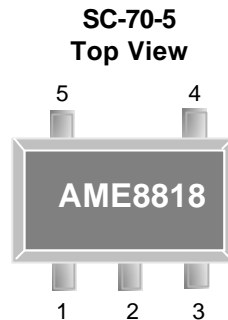
### ■ Pin Configuration (Contd.)



**AME8818AEIU**

1. EN
2. GND
3. OUT
4. IN

**Die Attach:  
Conductive Epoxy**



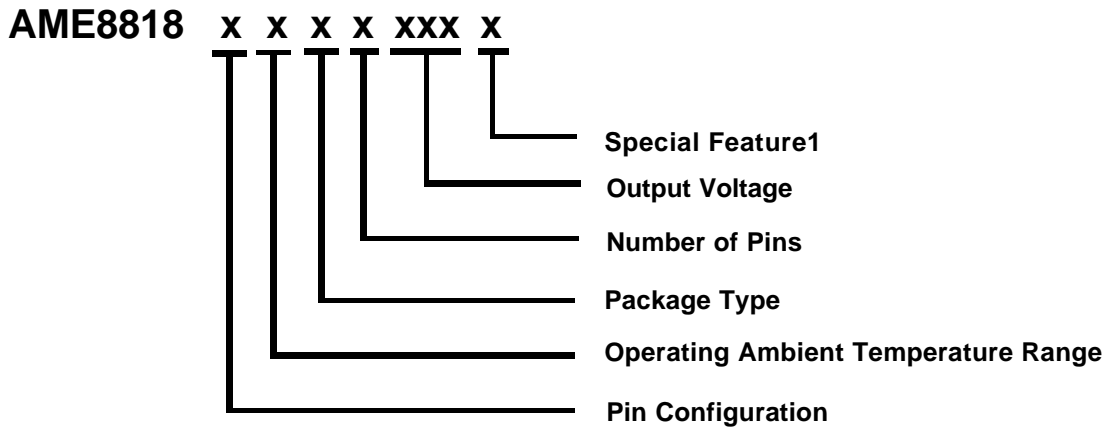
**AME8818AEIV**

1. IN
2. GND
3. EN
4. NC
5. OUT

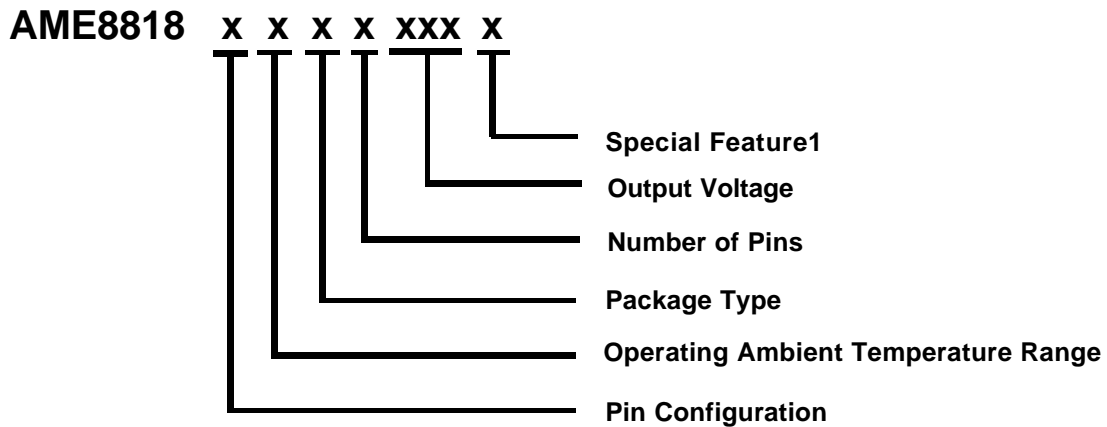
**Die Attach:  
Conductive Epoxy**

### ■ Pin Description

Pin Name	Pin Description
IN	Input voltage pin. It should be decoupled with 1 $\mu$ F or greater capacitor.
GND	Ground connection pin.
OUT	LDO voltage regulator output pin. It should be decoupled with a 1 $\mu$ F or greater value low ESR ceramic capacitor.
EN	The Enable pin normally floats high. When pulled low, the PMOS pass transistors shut off, and all internal circuit are powered down.
NC	No Internal Connection
BYP	Bypass capacitor connection. In AME8818BEEV and AME8818CEEV, IC will select internal circuit to improve ESR. In AME8818AEEV, IC will select external circuit to improve ESR and AC ripple rejection.
ADJ	Feedback output voltage for adjustable device.

**■ Ordering Information**


Pin Configuration	Operating Ambient Temperature Range	Package Type	Number of Pins	Output Voltage	Special Feature 1
A: 1. GND <small>(SOT-23)</small> 2. OUT 3. IN  A: 1.IN <small>(SOT-25)</small> 2.GND 3.EN 4.BYP 5.OUT  B: 1.IN <small>(SOT-25)</small> 2.GND 3.EN 4.NC 5.OUT  C: 1.EN <small>(SOT-25)</small> 2.GND 3.IN 4.OUT 5.NC  D: 1.IN <small>(SOT-25)</small> 2.GND 3.EN 4.ADJ 5.OUT	E: -40°C to +85°C	E: SOT-2X I: SC-70 (SC-82)	T: 3 U: 4 V: 5	120: V=1.2V 130: V=1.3V 150: V=1.5V 180: V=1.8V 250: V=2.5V 280: V=2.8V 285: V=2.85V 290: V=2.9V 300: V=3.0V 310: V=3.1V 320: V=3.2V 330: V=3.3V 360: V=3.6V 390: V=3.9V 450: V=4.5V ADJ: Adjustable	Z: Green

**AME8818**
**■ Ordering Information (Contd.)**


Pin Configuration	Operating Ambient Temperature Range	Package Type	Number of Pins	Output Voltage	Special Feature 1
E: 1.EN <small>(SOT-25)</small> 2.GND 3.IN 4.OUT 5.ADJ  A: 1.EN <small>(SC-70-4/ SC-82)</small> 2.GND 3.OUT 4.IN  A: 1.IN <small>(SC-70-5)</small> 2.GND 3.EN 4.NC 5.OUT	E: -40°C to +85°C	E: SOT-2X I: SC-70 (SC-82)	T: 3 U: 4 V: 5	120: V=1.2V 130: V=1.3V 150: V=1.5V 180: V=1.8V 250: V=2.5V 280: V=2.8V 285: V=2.85V 290: V=2.9V 300: V=3.0V 310: V=3.1V 320: V=3.2V 330: V=3.3V 360: V=3.6V 390: V=3.9V 450: V=4.5V ADJ: Adjustable	Z: Green

**■ Available Options**

Part Number	Marking	Output Voltage	Package	Operating Ambient Temperature Range
AME8818AEET120Z	BVPMXX	1.2V	SOT-23	-40°C to +85°C
AME8818AEET150Z	BVQMXX	1.5V	SOT-23	-40°C to +85°C
AME8818AEET180Z	BVRMXX	1.8V	SOT-23	-40°C to +85°C
AME8818AEET250Z	BVSMXX	2.5V	SOT-23	-40°C to +85°C
AME8818AEET280Z	BVTMXX	2.8V	SOT-23	-40°C to +85°C
AME8818AEET300Z	BVWMXX	3.0V	SOT-23	-40°C to +85°C
AME8818AEET310Z	BVXMXX	3.1V	SOT-23	-40°C to +85°C
AME8818AEET330Z	BVYMXX	3.3V	SOT-23	-40°C to +85°C
AME8818AEET450Z	BZXMXX	4.5V	SOT-23	-40°C to +85°C
AME8818AEEV120Z	BWAMXX	1.2V	SOT-25	-40°C to +85°C
AME8818AEEV150Z	BWBMXX	1.5V	SOT-25	-40°C to +85°C
AME8818AEEV180Z	BWCMXX	1.8V	SOT-25	-40°C to +85°C
AME8818AEEV250Z	BWDMXX	2.5V	SOT-25	-40°C to +85°C
AME8818AEEV280Z	BWEMXX	2.8V	SOT-25	-40°C to +85°C
AME8818AEEV300Z	BWHMXX	3.0V	SOT-25	-40°C to +85°C
AME8818AEEV310Z	BWIMXX	3.1V	SOT-25	-40°C to +85°C
AME8818AEEV320Z	BYEMXX	3.2V	SOT-25	-40°C to +85°C
AME8818AEEV330Z	BWJMXX	3.3V	SOT-25	-40°C to +85°C

**Note:**

1. The first 3 places represent product code. It is assigned by AME such as BVP.
2. A bar on top of first letter represents Green Part such as BVP.
3. The last 3 places MXX represent Marking Code. It contains M as date code in "month", XX as LN code and that is for AME internal use only. Please refer to date code rule section for detail information.
4. w represent the date code and please refer to date code rule section for detail information.
5. Please consult AME sales office or authorized Rep./Distributor for the availability of output voltage and package type.

**AME8818**
**■ Available Options (Contd.)**

<b>Part Number</b>	<b>Marking</b>	<b>Output Voltage</b>	<b>Package</b>	<b>Operating Ambient Temperature Range</b>
AME8818BEEV120Z	BWOMXX	1.2V	SOT-25	-40°C to +85°C
AME8818BEEV130Z	CDFMXX	1.3V	SOT-25	-40°C to +85°C
AME8818BEEV150Z	BWPMXX	1.5V	SOT-25	-40°C to +85°C
AME8818BEEV180Z	BWQMXX	1.8V	SOT-25	-40°C to +85°C
AME8818BEEV250Z	BWRMXX	2.5V	SOT-25	-40°C to +85°C
AME8818BEEV280Z	BWSMXX	2.8V	SOT-25	-40°C to +85°C
AME8818BEEV300Z	BWVMXX	3.0V	SOT-25	-40°C to +85°C
AME8818BEEV330Z	BWXMXX	3.3V	SOT-25	-40°C to +85°C
AME8818CEEV120Z	CAIMXX	1.2V	SOT-25	-40°C to +85°C
AME8818CEEV390Z	BYLMXX	3.9V	SOT-25	-40°C to +85°C
AME8818DEEVADJZ	BYSMXX	ADJ	SOT-25	-40°C to +85°C
AME8818EEEEVADJZ	CMNMXX	ADJ	SOT-25	-40°C to +85°C
AME8818AEIU120Z	CDCw	1.2V	SC-70-4 (SC-82)	-40°C to +85°C
AME8818AEIU180Z	CEKw	1.8V	SC-70-4 (SC-82)	-40°C to +85°C
AME8818AEIU280Z	CDDw	2.8V	SC-70-4 (SC-82)	-40°C to +85°C
AME8818AEIU300Z	CELw	3.0V	SC-70-4 (SC-82)	-40°C to +85°C
AME8818AEIU310Z	CEMw	3.1V	SC-70-4 (SC-82)	-40°C to +85°C



**AME8818**

**Low Dropout  
300mA CMOS Regulator**

**■ Available Options (Contd.)**

<b>Part Number</b>	<b>Marking</b>	<b>Output Voltage</b>	<b>Package</b>	<b>Operating Ambient Temperature Range</b>
AME8818AEIV120Z	CDVw	1.2V	SC-70-5	-40°C to +85°C
AME8818AEIV150Z	CDWw	1.5V	SC-70-5	-40°C to +85°C
AME8818AEIV180Z	CDGw	1.8V	SC-70-5	-40°C to +85°C
AME8818AEIV250Z	CDHw	2.5V	SC-70-5	-40°C to +85°C
AME8818AEIV300Z	CDXw	3.0V	SC-70-5	-40°C to +85°C
AME8818AEIV330Z	CDIw	3.3V	SC-70-5	-40°C to +85°C

**AME8818**
**■ Absolute Maximum Ratings**

Parameter	Symbol	Maximum	Unit
Input Voltage	$V_{IN}$	-0.3 to 6	V
EN Voltage	$V_{EN}$	-0.3 to 6	V
Output Current	$I_{OUT}$	$P_D / (V_{IN} - V_{OUT})$	mA
Output Voltage	$V_{OUT}$	-0.3 to $V_{IN} + 0.3$	V
ESD Classification	B*		

Caution: Stress above the listed absolute maximum rating may cause permanent damage to the device.

\* HBM B:2000V~3999V

**■ Recommended Operating Conditions**

Parameter	Symbol	Rating	Unit
Ambient Temperature Range	$T_A$	-40 to +85	°C
Junction Temperature Range	$T_J$	-40 to +125	
Storage Temperature Range	$T_{STG}$	-65 to +150	

**■ Thermal Information**

Parameter	Package	Die Attach	Symbol	Maximum	Unit
Thermal Resistance* (Junction to Case)	SOT-25	Conductive Epoxy	$\theta_{JC}$	81	°C / W
	SOT-23	Non-Conductive Epoxy		140	
	SC-70-4(SC-82)	Conductive Epoxy		N/A	
	SC-70-5				
Thermal Resistance (Junction to Ambient)	SOT-25	Conductive Epoxy	$\theta_{JA}$	260	°C / W
	SOT-23	Non-Conductive Epoxy		280	
	SC-70-4(SC-82)	Conductive Epoxy		331	
	SC-70-5				
Internal Power Dissipation	SOT-25	Conductive Epoxy	$P_D$	400	mW
	SOT-23	Non-Conductive Epoxy		400	
	SC-70-4(SC-82)	Conductive Epoxy		300	
	SC-70-5				
Maximum Junction Temperature				150	°C
Solder Iron (10Sec)**				350	°C

\* Measure  $\theta_{JC}$  on center of molding compound if IC has no tab.

\*\* MIL-STD-202G 210F

### AME8818

#### ■ Electrical Specifications

$V_{IN} = V_{OUT(NOM)} + 1V$  or  $V_{IN} = 2.5V$ , if  $V_{OUT(NOM)} \leq 2.0V$ ,  $I_{OUT} = 1mA$ ,  $V_{EN} = V_{IN}$  and  $C_{OUT} = C_{IN} = 1\mu F$ , Typical values at  $T_A = 25^\circ C$ , unless otherwise noted.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units	
Input Voltage	$V_{IN}$		(Note1)		5.5	V	
ADJ Input Bias Current	$I_{ADJ}$	$V_{IN}=5V, V_{ADJ}=0.980$		1		$\mu A$	
ADJ Reference Voltage	$V_{REF}$		0.965	0.980	0.995	V	
Output Voltage Accuracy	$V_{OUT,ACC}$		-2		2	%	
Output Voltage Range	$V_{OUT}$		1.2		4.5	V	
Output Current	$I_{OUT}$		300			mA	
Quiescent Current	$I_Q$	$V_{IN} = 5.5V, I_{OUT} = 1mA$		70	100	$\mu A$	
Dropout Voltage	$V_{DROP}$	$I_{OUT} = 300mA$	$V_{OUT} = 2.0V$	(Note2)		mV	
			$2.0V < V_{OUT} < 2.5V$		370		500
			$2.6V < V_{OUT} < 3.0V$		280		400
			$V_{OUT} = 3.1V$		230		330
Output Voltage Line Regulation [ $(\Delta V_{OUT} / \Delta V_{IN}) \times 100\%$ ] / $V_{OUT}$	$REG_{LINE}$	$V_{IN(MIN)} \quad V_{IN} \quad V_{IN(MAX)}$	$1.2V \quad V_{OUT} < 2.5V$	-0.4	0.1	0.4	% / V
		$V_{IN(MIN)} \quad V_{IN} \quad V_{IN(MAX)}$	$2.5 \quad V_{OUT} < 3.3V$	-0.2	0.03	0.2	
		$V_{OUT} + 0.3V \quad V_{IN} \quad V_{IN(MAX)}$	$3.3V \quad V_{OUT} < 4.5V$	-0.1	0.01	0.1	
Output Voltage Load Regulation [ $(\Delta V_{OUT} / V_{OUT}) \times 100\%$ ] / $\Delta I_{OUT}$	$REG_{LOAD}$	$1mA \quad I_{OUT} \quad 300mA$	$V_{OUT} = 3.3V$	-0.003		0.002	% / mA
			$2.5V \quad V_{OUT} < 3.3V$	-0.005		0.004	
			$1.2V \quad V_{OUT} < 2.5V$	-0.015		0.01	
Output Current Limit	$I_{LIM}$	$V_{OUT} = 0.8 \times V_{OUT(NOM)}$	330	500		mA	
Shutdown Current	$I_{SHDN}$	$V_{EN} = 0V, V_{IN(MIN)} \quad V_{IN} \quad 5.5V$		5	10	$\mu A$	
Power Supply Ripple Rejection	PSRR	$f = 1KHz, I_{OUT} = 100mA, C_{out} = 1\mu F$ (Note3)		60		dB	
Enable High (enabled)	$V_{EN(HI)}$	$V_{IN(MIN)} \quad V_{IN} \quad 5.5V$	1.4		$V_{IN}$	V	
Enable Low (shutdown)	$V_{EN(LO)}$	$V_{IN(MIN)} \quad V_{IN} \quad 5.5V$	0		0.4	V	
Enable Pin Current (enabled)	$I_{EN}$	$V_{EN} = V_{IN}$		0.1	1	$\mu A$	
Thermal Shutdown Temperature	$T_{SHDN}$	Shutdown, temperature increasing		150		$^\circ C$	
	$T_{RS}$	Restore, temperature decreasing		130			

Note 1:  $V_{IN(MIN)} = V_{OUT} + V_{DROP}$  or  $V_{IN(MIN)} = 2.5V$ , whichever is greater.

Note 2: For  $V_{OUT}$  below 2.0V, Dropout Voltage is the input<sub>(MIN)</sub> to output differential.

Note 3: For  $V_{OUT}$  below 1.5V, the input<sub>(MIN)</sub> is 3.0V.

## ■ Detailed Description

The AME8818 is low-dropout, low quiescent-current linear regulator designed primarily for battery-powered applications. It is available with present output voltage ranging from 1.2V to 4.5V, and can supply loads up to 300mA.

## ■ Shutdown Mode

The AME8818 has enable-control-pin. Drive EN low to shutdown OUT. Drive EN to shutdown the entire chip, reducing supply current to 5 $\mu$ A. Connected EN to logic-high or IN for normal operation.

## ■ Circuit Limit

The AME8818 contains current limiters which monitor and control the pass transistor's Gate voltage, limiting the guaranteed maximum output current to 330mA minimum. The output can be shorted to ground for an indefinite time without damaging the part.

## ■ Thermal-Overload Protection

Thermal-overload protection limits total power dissipation in the AME8818. When the junction temperature arrive  $T_J = 160^{\circ}\text{C}$  approximately, the thermal sensor signals the shutdown logic, turning off the pass transistor and allowing the IC to cool.

## ■ PSRR and Operation from sources Other than Batteries

The AME8818 is designed to deliver low-dropout voltage and low quiescent currents in battery-powered system. Power-supply rejection ratio is 60dB (Typ.) at 1KHz. When operating from sources other than batteries, PSRR and transient response can be improved by increasing input, output and bypass capacitors(see PSRR vs Frequency Curve).

## ■ Capacitor Selection and Regulator Stability

Use a 1 $\mu$ F capacitor on the AME8818 input and a 1 $\mu$ F capacitor on the OUT. Larger input capacitor values and lower ESR provide better supply noise rejection and line transient response. To reduce output noise and improve load transient voltage dips, use larger output capacitors up to 4.7 $\mu$ F. For stable operation over the full temperature range with load currents up to 300mA, input and output capacitors should be a minimum of 1 $\mu$ F by X7R.

Note that some ceramic dielectrics large capacitance and ESR variation with temperature. With dielectrics such as Z5U and Y5V, it may be necessary to use 2.2 $\mu$ F or more for up to 300mA load current to ensure stability at temperatures below  $-10^{\circ}\text{C}$ . With X7R or X5R dielectrics, 1 $\mu$ F is sufficient at all operating temperatures. These regulators are optimized for ceramic capacitors. Tantalum capacitors are not recommended.

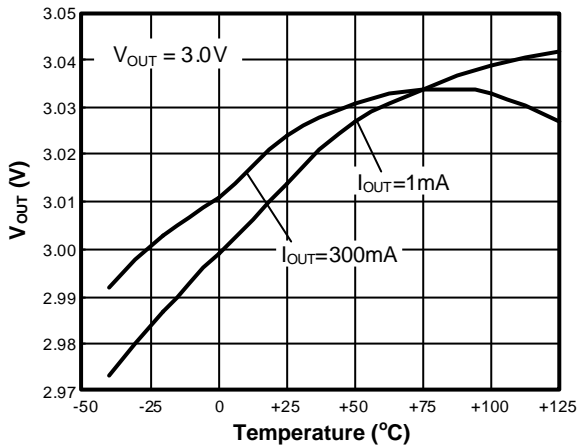
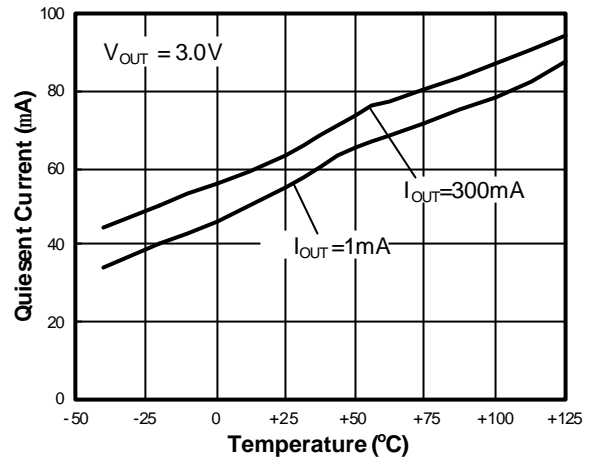
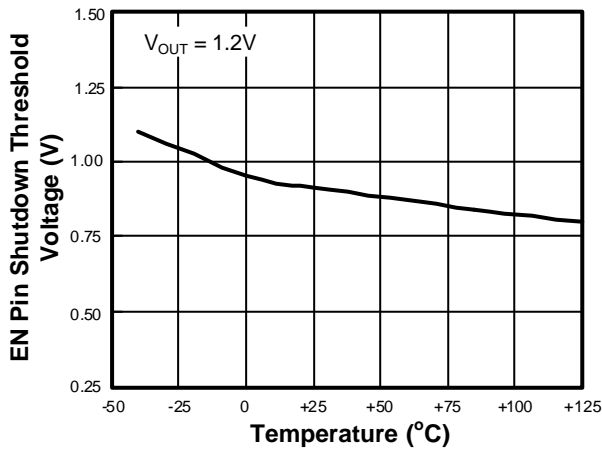
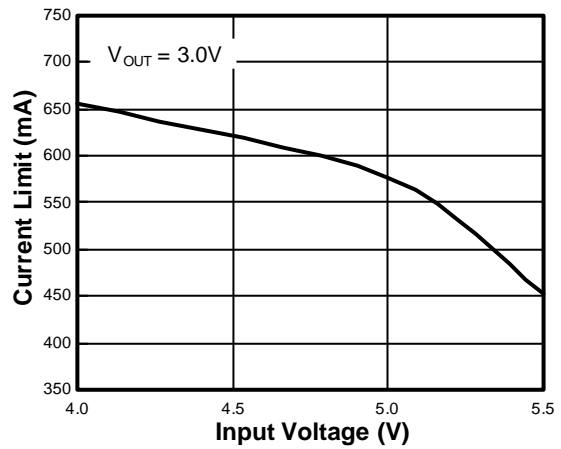
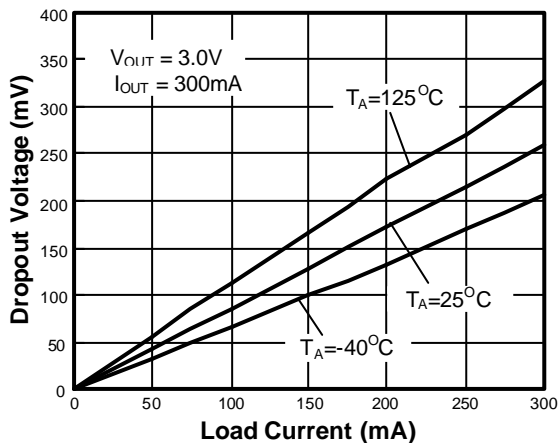
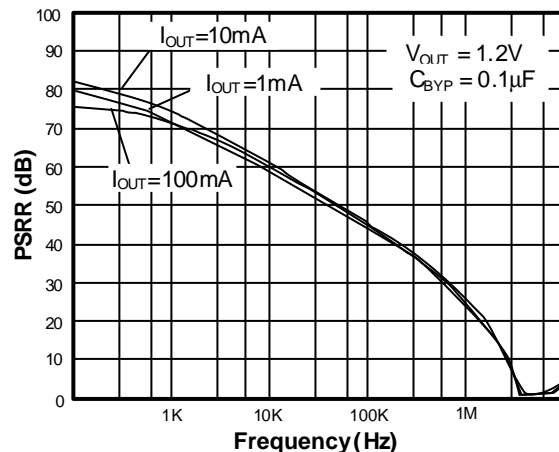
Bypass capacitor can be in between 0.1 $\mu$ F~0.001 $\mu$ F. A larger capacitor improves AC ripple rejection, but also make the output come up slowly.

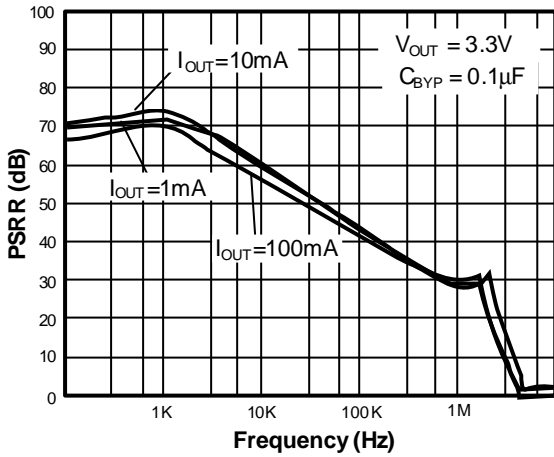
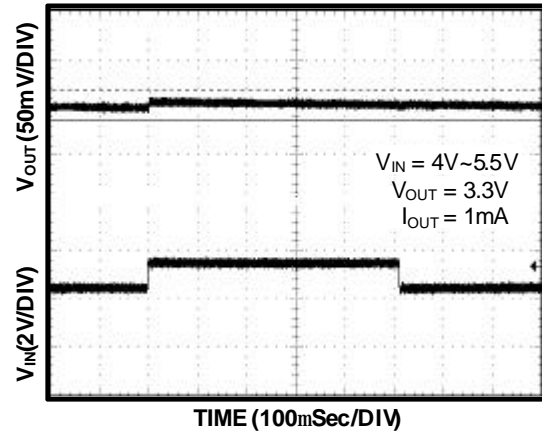
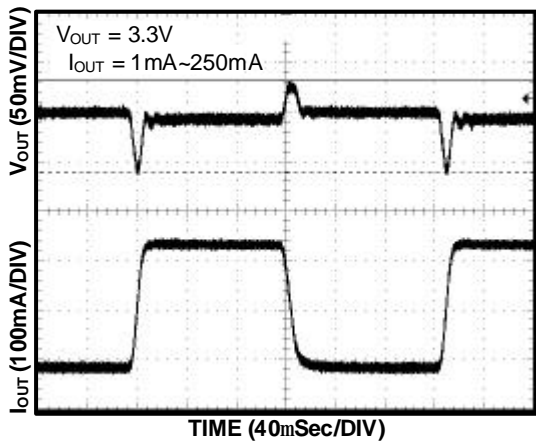
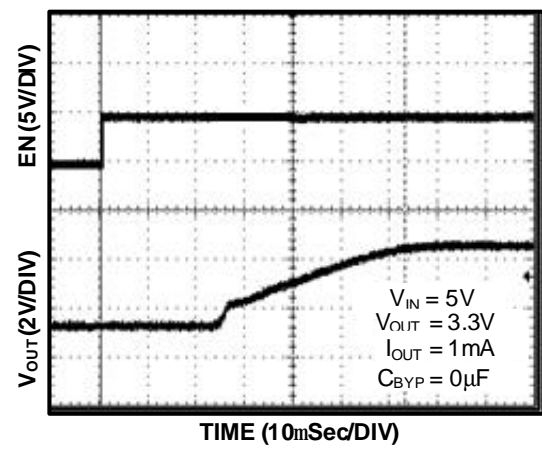
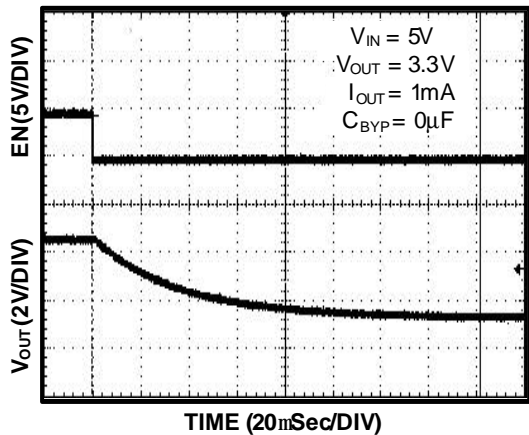
## ■ Adjustable Version

The adjustable version uses external feedback resistors to generate an output voltage anywhere from 0.98V to 4.5V.  $V_{\text{ADJ}}$  is trimmed to 0.98V and  $V_{\text{OUT}}$  is given by the equation:

$$V_{\text{OUT}} = V_{\text{ADJ}} ( 1 + R1 / R2 )$$

Feedback resistors R1 and R2 should be high enough to keep quiescent current low, but increasing R1 + R2 will reduce stability. In general, R1 and R2 in the 10's of k $\Omega$  will produce adequate stability, given reasonable layout precautions. To improve stability characteristics, keep parasitics on the ADJ pin to a minimum, and lower R1 and R2 values.

**■ Characterization Curve(For reference only)**
 **$V_{OUT}$  vs Temperature**

**Quiescent Current vs Temperature**

**EN Pin Shutdown Threshold Voltage vs Temperature**

**Current Limit vs Input Voltage**

**Dropout Voltage vs Load Current**

**Power Supply Rejection Ratio**


**■ Characterization Curve(For reference only)**
**Power Supply Rejection Ratio**

**Line Transient Response**

**Load Transient Response**

**Start Up delay time**

**EN Pin shutdown Response**


**AME8818**
**■ Date Code Rule**

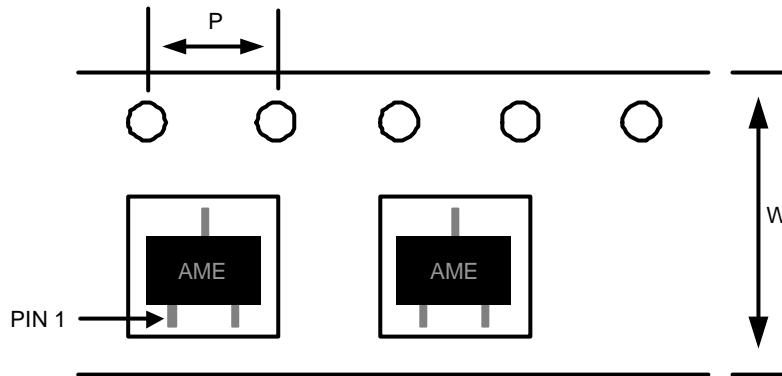
Month Code	
1: January	7: July
2: February	8: August
3: March	9: September
4: April	A: October
5: May	B: November
6: June	C: December

Marking						Year
A	A	A	M	X	X	xxx0
A	A	A	M	X	<u>X</u>	xxx1
A	A	A	M	<u>X</u>	X	xxx2
A	A	A	M	<u>X</u>	<u>X</u>	xxx3
A	A	A	<u>M</u>	X	X	xxx4
A	A	A	<u>M</u>	X	<u>X</u>	xxx5
A	A	A	<u>M</u>	<u>X</u>	X	xxx6
A	A	A	<u>M</u>	<u>X</u>	<u>X</u>	xxx7
A	A	<u>A</u>	M	X	X	xxx8
A	A	<u>A</u>	M	X	<u>X</u>	xxx9

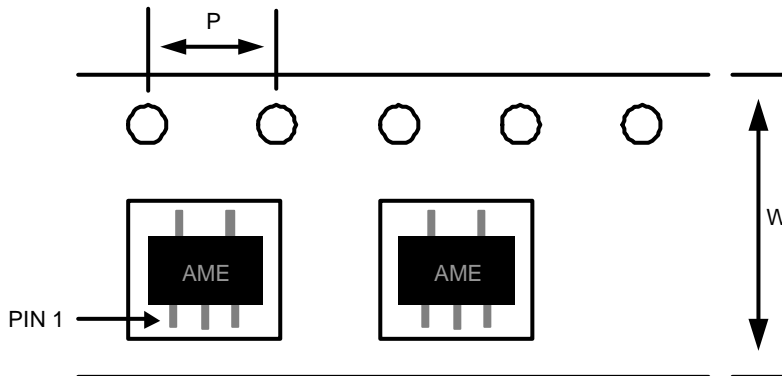
**For SC-70 (SC-82) Package Only**

Marking			Date Code	Year
A	A	A	W	xxx0
A	A	A	<u>W</u>	xxx1
A	A	<u>A</u>	W	xxx2
A	A	<u>A</u>	<u>W</u>	xxx3
A	<u>A</u>	A	W	xxx4
A	<u>A</u>	A	<u>W</u>	xxx5
A	<u>A</u>	<u>A</u>	W	xxx6
A	<u>A</u>	<u>A</u>	<u>W</u>	xxx7
<u>A</u>	A	A	W	xxx8
<u>A</u>	A	A	<u>W</u>	xxx9

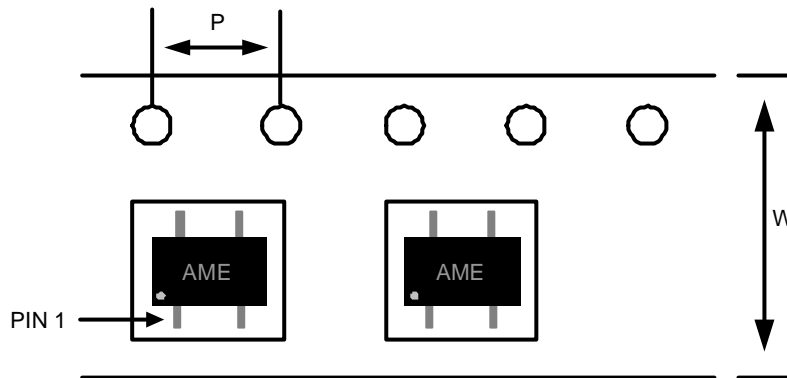
w: Work Week Code		
A: 01&02	K: 21&22	U: 41&42
B: 03&04	L: 23&24	V: 43&44
C: 05&06	M: 25&26	W: 45&46
D: 07&08	N: 27&28	X: 47&48
E: 09&10	O: 29&30	Y: 49&50
F: 11&12	P: 31&32	Z: 51&52
G: 13&14	Q: 33&34	
H: 15&16	R: 35&36	
I: 17&18	S: 37&38	
J: 19&20	T: 39&40	

**■ Tape and Reel Dimension**
**SOT-23**

**Carrier Tape, Number of Components Per Reel and Reel Size**

Package	Carrier Width (W)	Pitch (P)	Part Per Full Reel	Reel Size
SOT-23	8.0±0.1 mm	4.0±0.1 mm	3000pcs	180±1 mm

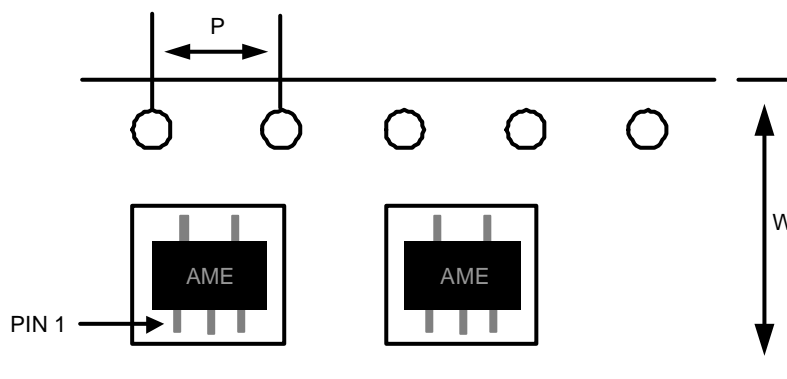
**SOT-25**

**Carrier Tape, Number of Components Per Reel and Reel Size**

Package	Carrier Width (W)	Pitch (P)	Part Per Full Reel	Reel Size
SOT-25	8.0±0.1 mm	4.0±0.1 mm	3000pcs	180±1 mm

**AME8818**
**■ Tape and Reel Dimension (Contd.)**
**SC-70-4 (SC-82)**


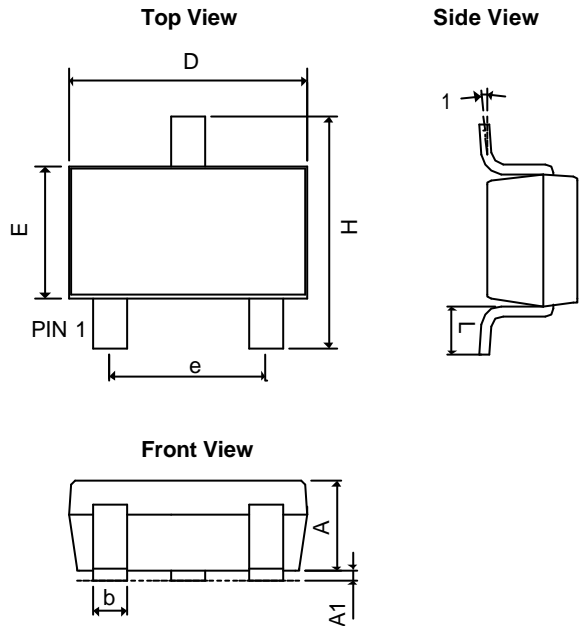
**Carrier Tape, Number of Components Per Reel and Reel Size**

Package	Carrier Width (W)	Pitch (P)	Part Per Full Reel	Reel Size
SC-70-4	8.0±0.1 mm	4.0±0.1 mm	3000pcs	180±1 mm

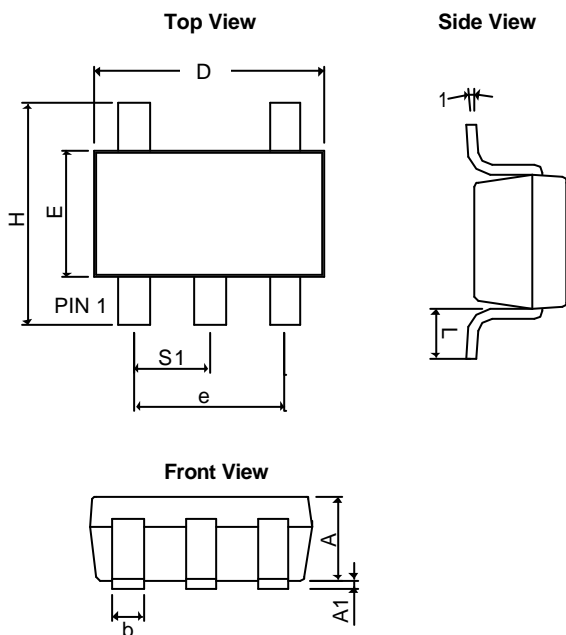
**SC-70-5**


**Carrier Tape, Number of Components Per Reel and Reel Size**

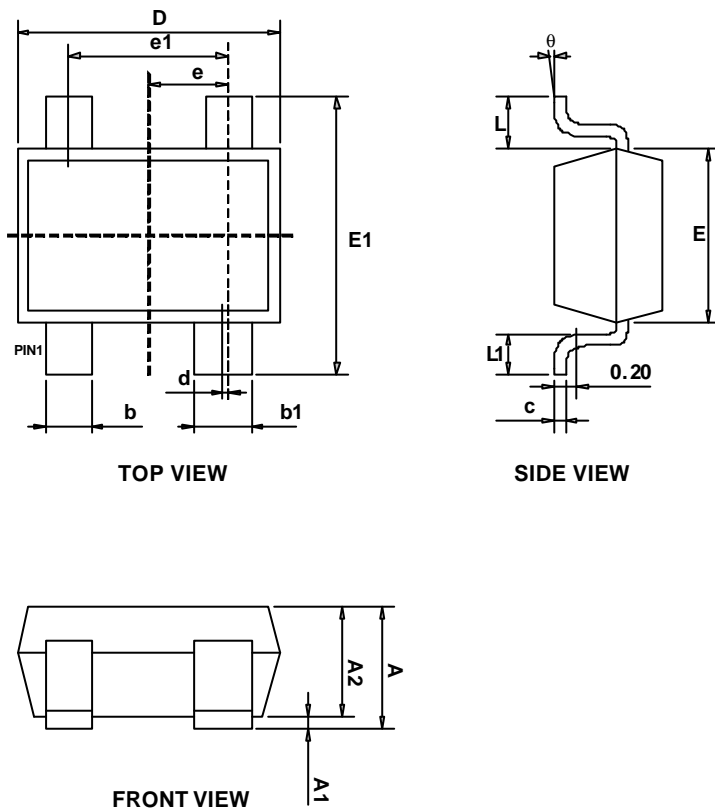
Package	Carrier Width (W)	Pitch (P)	Part Per Full Reel	Reel Size
SC-70-5	8.0±0.1 mm	4.0±0.1 mm	3000pcs	180±1 mm

**■ Package Dimension**
**SOT-23**


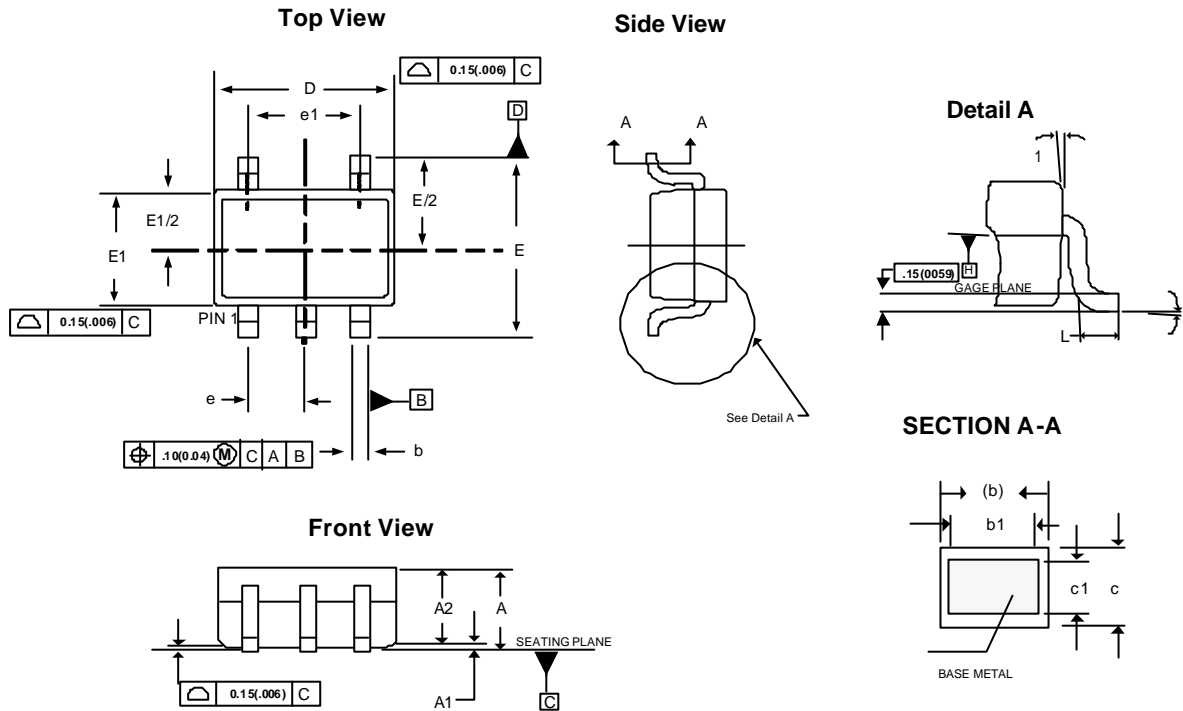
SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.40	0.0354	0.0551
A <sub>1</sub>	0.00	0.15	0.0000	0.0059
b	0.30	0.50	0.0118	0.0197
D	2.70	3.10	0.1063	0.1220
E	1.40	1.80	0.0551	0.0709
e	1.90 BSC		0.0748 BSC	
H	2.40	3.00	0.0945	0.1181
L	0.35BSC		0.0138BSC	
q1	0°	10°	0°	10°

**SOT-25**


SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.90	1.30	0.0354	0.0512
A <sub>1</sub>	0.00	0.15	0.0000	0.0059
b	0.30	0.55	0.0118	0.0217
D	2.70	3.10	0.1063	0.1220
E	1.40	1.80	0.0551	0.0709
e	1.90 BSC		0.07480 BSC	
H	2.60	3.00	0.10236	0.11811
L	0.37BSC		0.0146BSC	
q1	0°	10°	0°	10°
S <sub>1</sub>	0.95BSC		0.0374BSC	

**AME8818**
**■ Package Dimension (Contd.)**
**SC-70-4 (SC-82)**


SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
<b>A</b>	0.900	1.100	0.035	0.043
<b>A1</b>	0.000	0.100	0.000	0.004
<b>A2</b>	0.900	1.000	0.035	0.039
<b>b</b>	0.250	0.400	0.010	0.016
<b>b1</b>	0.350	0.500	0.014	0.020
<b>c</b>	0.080	0.150	0.003	0.006
<b>d</b>	0.050 TYP		0.002 TYP	
<b>D</b>	2.000	2.200	0.079	0.087
<b>E</b>	1.150	1.350	0.045	0.053
<b>E1</b>	2.150	2.450	0.085	0.096
<b>e</b>	0.650 TYP		0.026 TYP	
<b>e1</b>	1.200	1.400	0.047	0.055
<b>L</b>	0.525 REF		0.021 REF	
<b>L1</b>	0.260	0.460	0.010	0.018
<b>q</b>	0°	8°	0°	8°

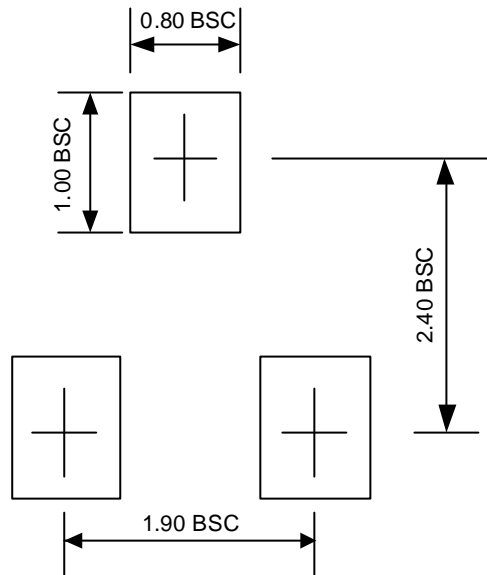
**■ Package Dimension (Contd.)**
**SC-70-5**


SYMBOLS	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.80	1.10	0.0315	0.0433
A1	0.00	0.10	0.0000	0.0039
A2	0.80	1.00	0.0315	0.0394
b	0.15	0.35	0.0059	0.0138
b1	0.15	0.25	0.0059	0.0098
c	0.08	0.25	0.0031	0.0098
c1	0.08	0.20	0.0031	0.0079
D	1.85	2.20	0.0728	0.0866
E	1.80	2.45	0.0709	0.0965
E1	1.10	1.40	0.0433	0.0551
e	0.65 BSC		0.0255 BSC	
e1	1.20	1.40	0.0472	0.0551
L	0.26	0.46	0.0102	0.0181
q1	0°	8°	0°	8°
q	4°	10°	4°	10°

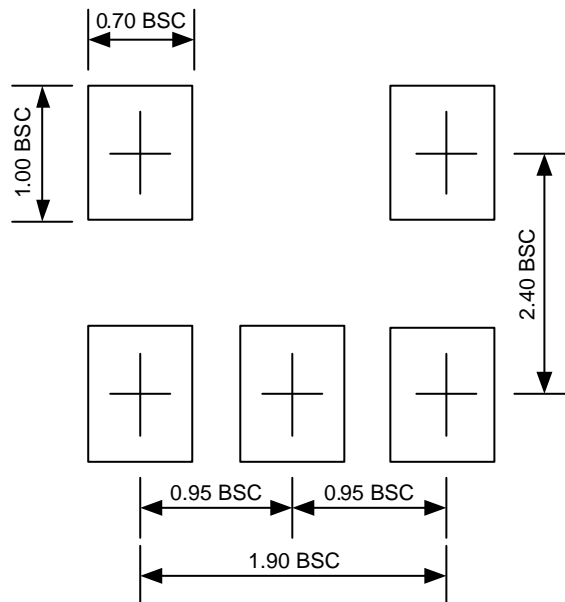
## AME8818

### ■ Lead Pattern

#### SOT-23



#### SOT-25



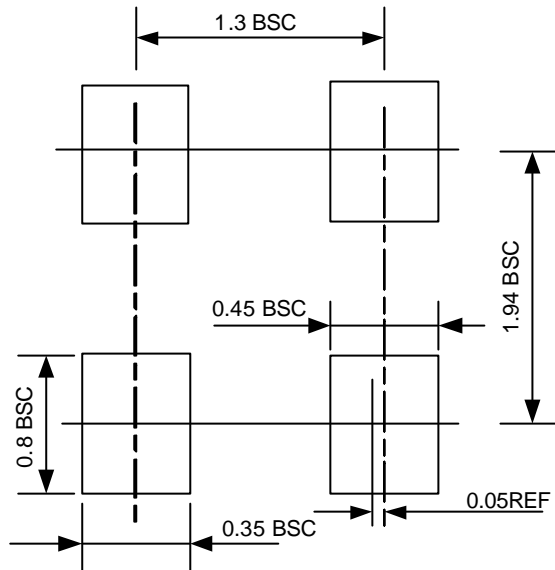
**Note:**

1. Lead pattern unit description:

BSC: Basic. Represents theoretical exact dimension or dimension target.

2. Dimensions in Millimeters.

3. General tolerance  $\pm 0.05\text{mm}$  unless otherwise specified.

**■ Lead Pattern (Contd.)**
**SC-70-4**


Note:

1. Lead pattern unit description:

BSC: Basic. Represents theoretical exact dimension or dimension target.

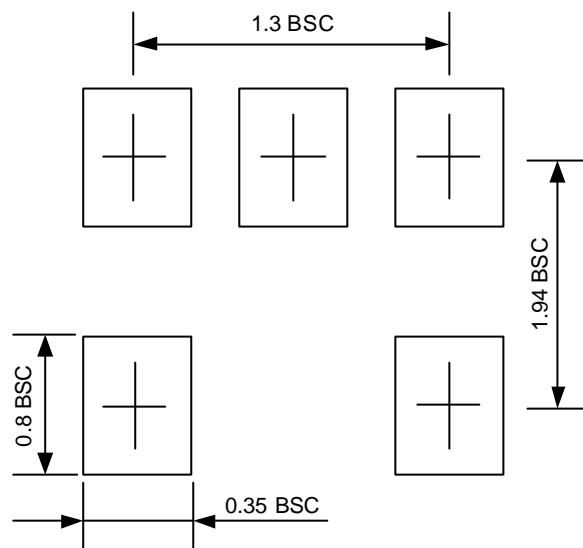
REF: Reference. Represents dimension for reference use only. This value is not a device specification.

2. Dimensions in Millimeters.

3. General tolerance  $\pm 0.05\text{mm}$  unless otherwise specified.

**AME8818****■ Lead Pattern (Contd.)**

SC-70-5



Note:

1. Lead pattern unit description:

BSC: Basic. Represents theoretical exact dimension or dimension target.

2. Dimensions in Millimeters.

3. General tolerance  $\pm 0.05\text{mm}$  unless otherwise specified.



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