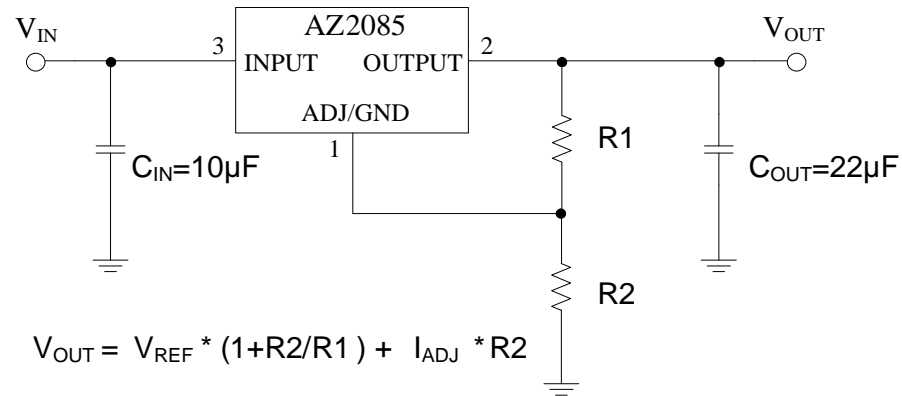


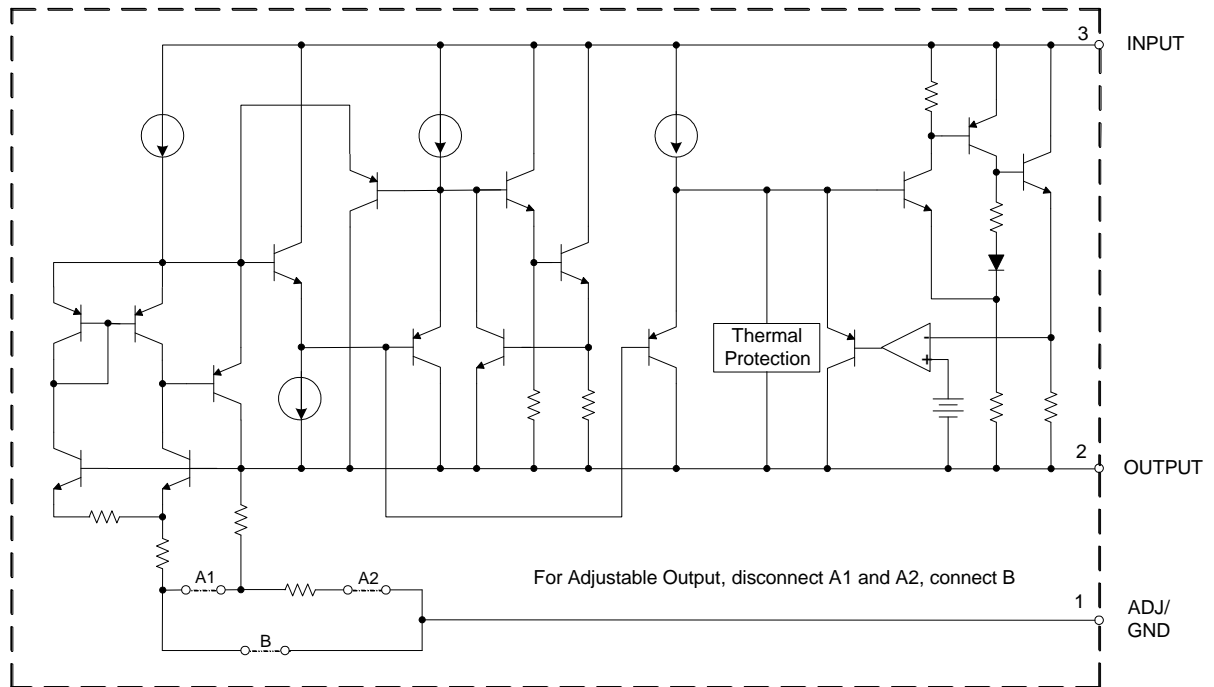
Typical Applications Circuit



Pin Descriptions

Pin Number	Pin Name	Function
1	ADJ/GND	Adjust pin/Ground
2	OUTPUT	Output voltage
3	INPUT	Input voltage

Functional Block Diagram



NEW PRODUCT

Absolute Maximum Ratings (Note 4)

Symbol	Parameter	Rating	Unit
V_{IN}	Input Voltage	18	V
T_J	Operating Junction Temperature	+150	°C
T_{STG}	Storage Temperature Range	-65 to +150	°C
T_{LEAD}	Lead Temperature (Soldering, 10sec)	+260	°C
θ_{JA}	Thermal Resistance (Junction to Ambient)	100	°C/W
—	ESD (Human Body Model)	2000	V

Note 4: Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "Recommended Operating Conditions" is not implied. Exposure to "Absolute Maximum Ratings" for extended periods may affect device reliability.

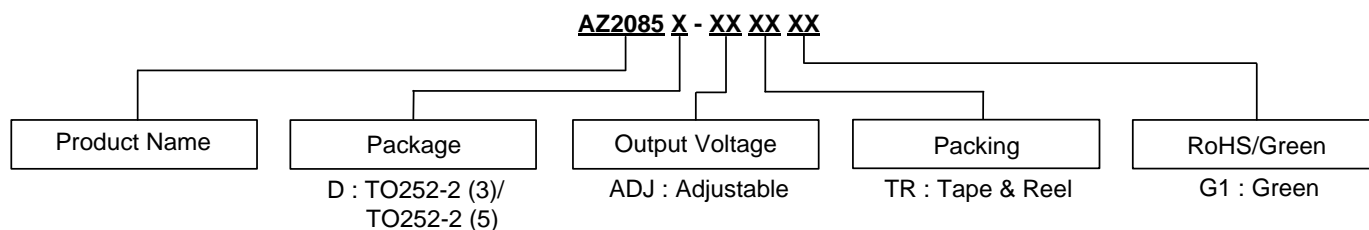
Recommended Operating Conditions

Symbol	Parameter	Min	Max	Unit
V_{IN}	Input Voltage	—	12	V
T_J	Operating Junction Temperature	0	+125	°C

Electrical Characteristics (Typicals and limits appearing in normal type apply for $T_J = +25^\circ\text{C}$. Limits appearing in **Boldface** type apply over the entire operating junction temperature range 0 to $+125^\circ\text{C}$.)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{REF}	Reference Voltage	$I_{OUT} = 10\text{mA}$, $V_{IN}-V_{OUT} = 3\text{V}$, $T_J = +25^\circ\text{C}$, $10\text{mA} \leq I_{OUT} \leq 3\text{A}$, $1.5\text{V} \leq V_{IN}-V_{OUT} \leq 5\text{V}$	1.238 1.225	1.250 1.250	1.262 1.275	V
$\Delta V_{OUT}/V_{OUT}$	Load Regulation	$0\text{A} \leq I_{OUT} \leq 3\text{A}$, $V_{IN}-V_{OUT} = 3\text{V}$	—	0.1 0.2	0.3 0.4	%
$\Delta V_{OUT}/\Delta V_{IN}$	Line Regulation	$I_{OUT} = 10\text{mA}$, $2.85\text{V} \leq V_{IN} \leq 10\text{V}$	—	0.015 0.035	0.2 0.2	%
V_{DROP}	Dropout Voltage	$I_{OUT} = 3\text{A}$, ΔV_{REF} , $\Delta V_{OUT} = 1\%$	—	1.2	1.5	V
I_{LIMIT}	Current Limit	$V_{IN}-V_{OUT} = 3\text{V}$	3.2	4.5	—	A
I_{LOAD}	Minimum Load Current	$V_{IN} = 10\text{V}$	—	0.3	1	mA
I_{ADJ}	Adjust Pin Current	$V_{IN} = 4.25\text{V}$, $I_{OUT} = 10\text{mA}$	—	6	10	μA
ΔI_{ADJ}	Adjust Pin Current Change	$10\text{mA} \leq I_{OUT} \leq 3\text{A}$, $1.5\text{V} \leq V_{IN}-V_{OUT} \leq 6\text{V}$	—	0.3	2	μA
PSRR	Ripple Rejection	$f_{RIPPLE} = 120\text{Hz}$, $C_{OUT} = 22\mu\text{F}$, $I_{OUT} = 3\text{A}$, $V_{IN}-V_{OUT} = 3\text{V}$	—	72	—	dB
—	Long Term Stability	$T_A = +125^\circ\text{C}$, 1000Hrs	—	0.5	—	%
—	Temperature Stability	$I_{OUT} = 10\text{mA}$, $V_{IN}-V_{OUT} = 1.5\text{V}$	—	0.5	—	%
—	RMS Noise (% of V_{OUT})	$T_A = +125^\circ\text{C}$, $10\text{Hz} \leq f \leq 10\text{kHz}$	—	0.003	—	%
—	OTSD	—	+130	+150	+170	$^\circ\text{C}$
—	OTSD Hysteresis	—	—	+20	—	$^\circ\text{C}$
—	Pulse Current	Pulse Width $\leq 100\mu\text{s}$	—	7	12	A
θ_{JC}	Thermal Resistance (Junction to Case)	—	—	7.36	—	$^\circ\text{C/W}$

Ordering Information



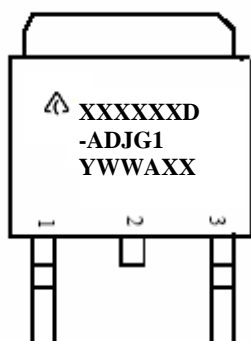
Diodes IC's Pb-free products with "G1" suffix in the part number, are RoHS compliant and green.

Package	Temperature Range	Part Number	Marking ID	Packing
TO252-2 (3)/ TO252-2 (5)	0 to +125°C	AZ2085D-ADJTRG1	AZ2085D-ADJG1	2500/Tape & Reel

Marking Information

(1) TO252-2 Series

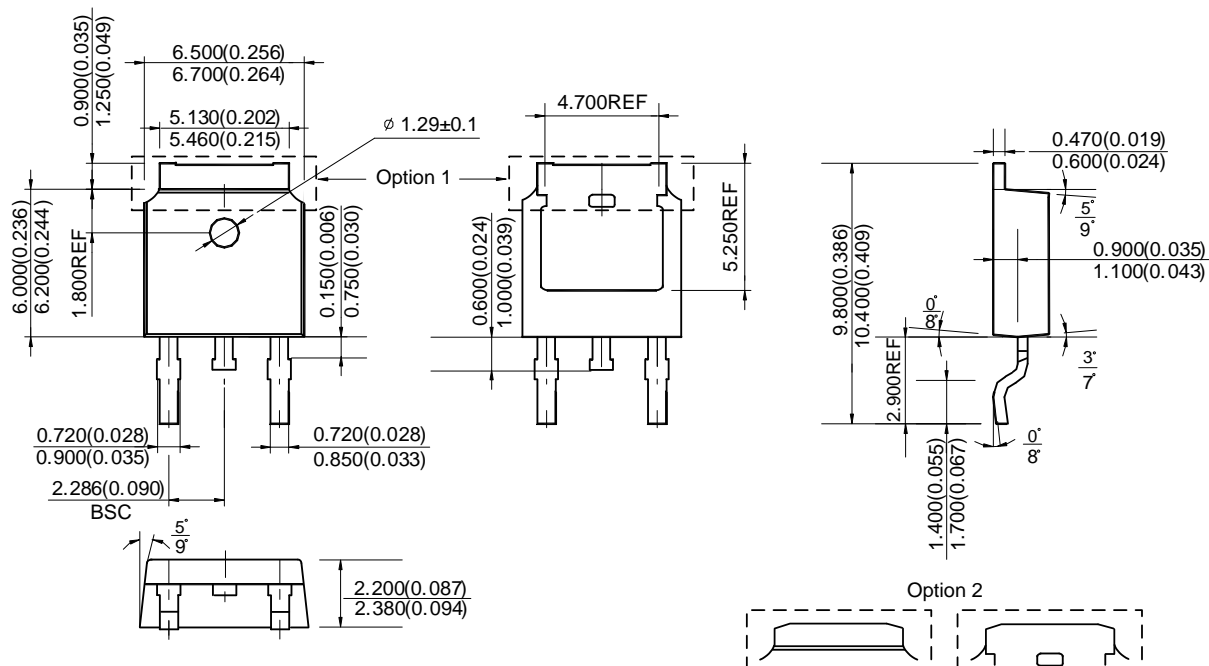
(Top View)



First and Second Lines: Logo and Marking ID
(See Ordering Information)
Third Line: Date Code
Y: Year
WW: Work Week of Molding
A: Assembly House Code
XX: 7th and 8th Digits of Batch No.

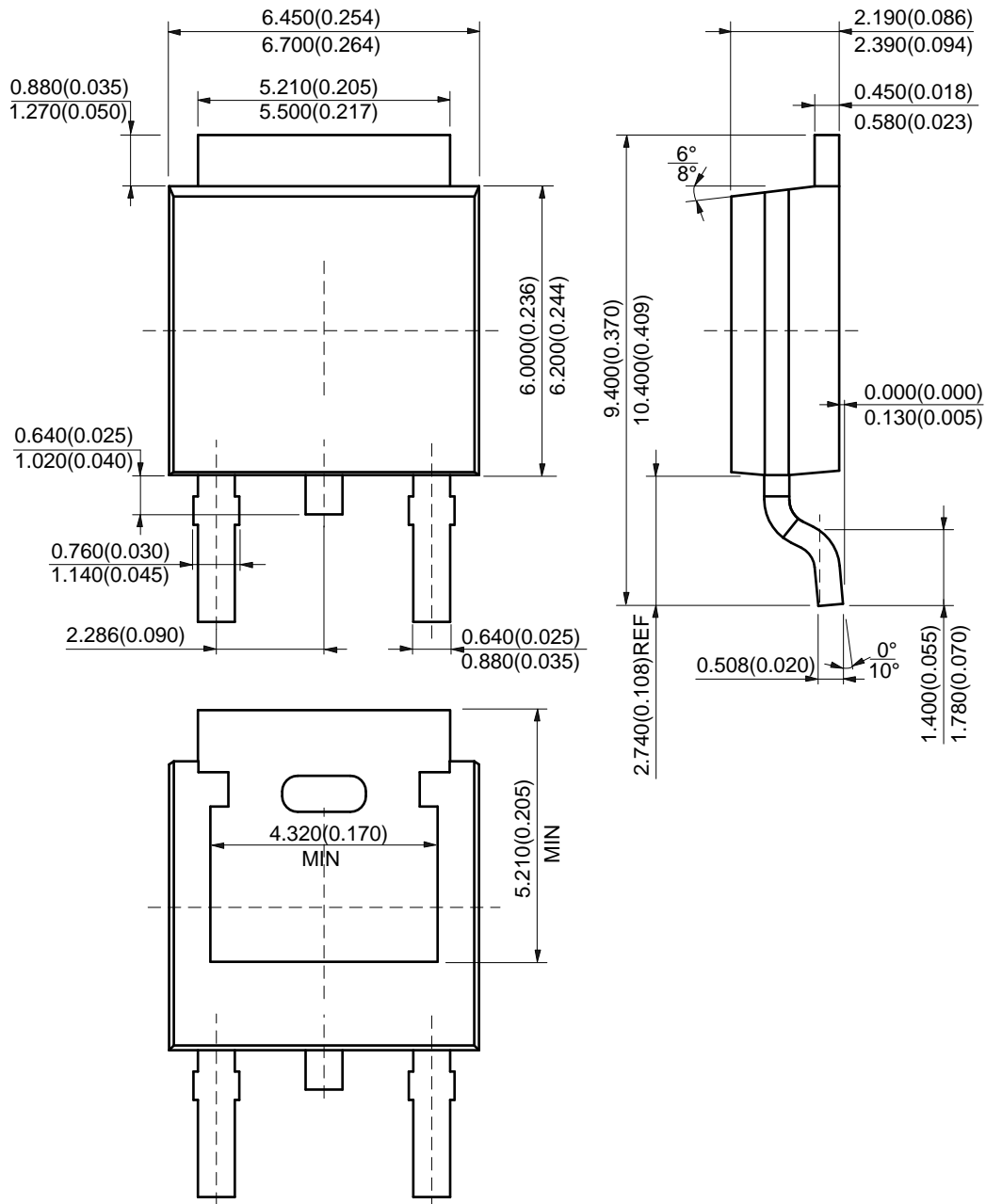
Package Outline Dimensions (All dimensions in mm(inch).)

(1) Type Package: TO252-2 (3)



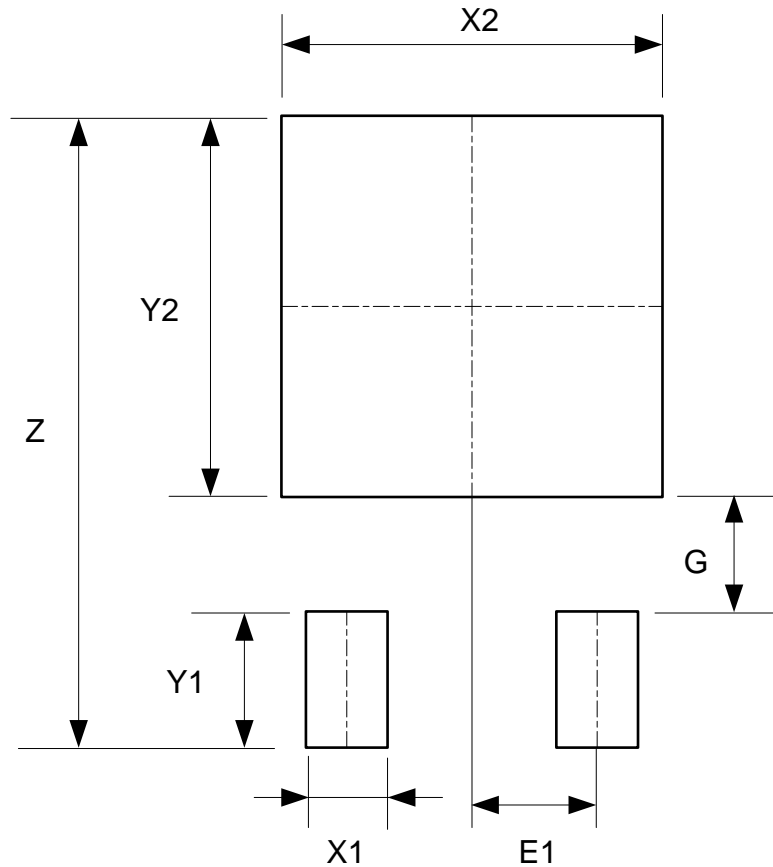
Package Outline Dimensions (Cont. All dimensions in mm(inch).)

(2) Package Type: TO252-2 (5)



Suggested Pad Layout

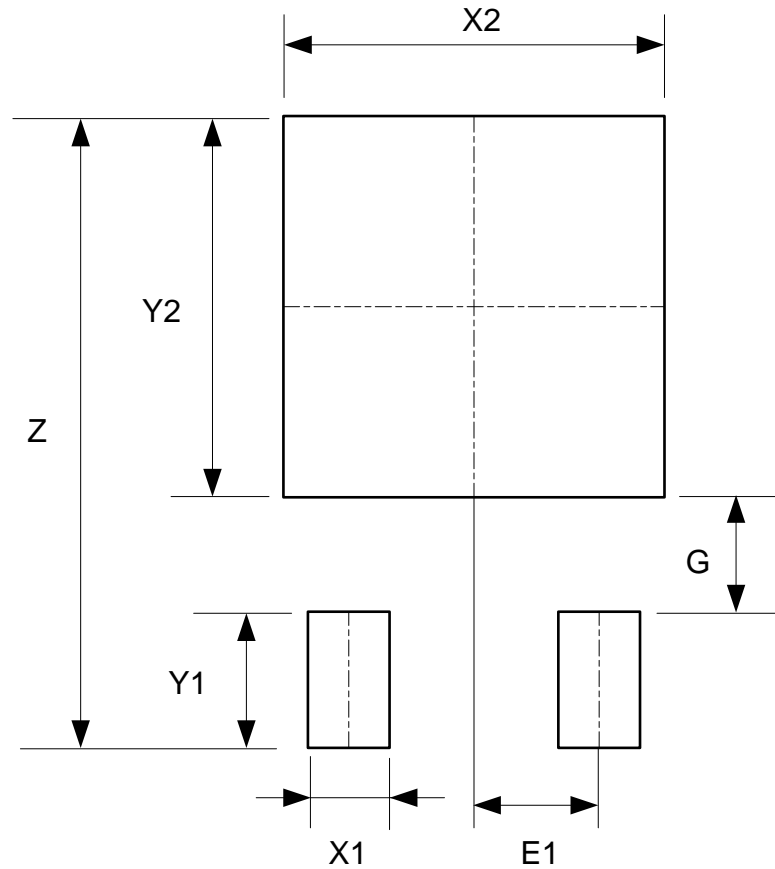
(1) Package Type: TO252-2 (3)



Dimensions	Z (mm)/(inch)	X1 (mm)/(inch)	X2=Y2 (mm)/(inch)	Y1 (mm)/(inch)	G (mm)/(inch)	E1 (mm)/(inch)
Value	11.600/0.457	1.500/0.059	7.000/0.276	2.500/0.098	2.100/0.083	2.300/0.091

Suggested Pad Layout (Cont.)

(2) Package Type: TO252-2 (5)



Dimensions	Z (mm)/(inch)	X1 (mm)/(inch)	X2=Y2 (mm)/(inch)	Y1 (mm)/(inch)	G (mm)/(inch)	E1 (mm)/(inch)
Value	11.600/0.457	1.500/0.059	7.000/0.276	2.500/0.098	2.100/0.083	2.300/0.091

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