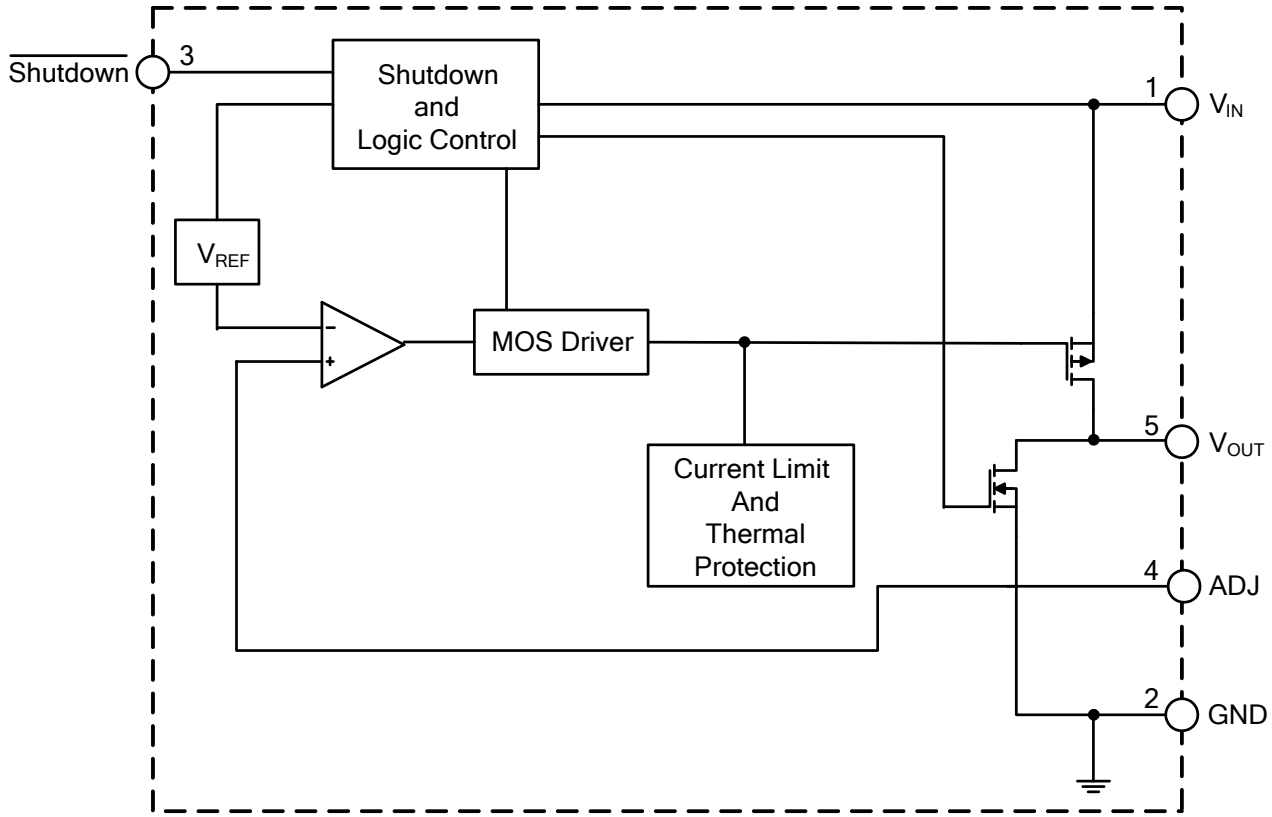
Functional Block Diagram



Absolute Maximum Ratings (Note 4)

Symbol	Parameter	Rating	Unit
V_{IN}	Input Voltage	6.5	V
V_{CE}	Shutdown Input Voltage	-0.3 to V_{IN} +0.3	V
I_{OUT}	Output Current	450	mA
T_J	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)	250	°C/W
ESD	ESD (Human Body Model)	6000	V
ESD	ESD (Machine Model)	250	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

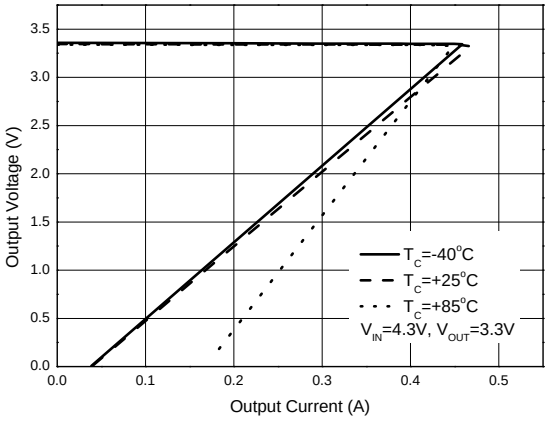
Symbol	Parameter	Min	Max	Unit
V_{IN}	Input Voltage	3.0	6	V
T_A	Operating Ambient Temperature Range	-40	+85	°C

Electrical Characteristics (AP2126-ADJ, V_{IN} min = 3.0V, C_{IN} = 1µF, C_{OUT} = 1µF, unless otherwise specified.)

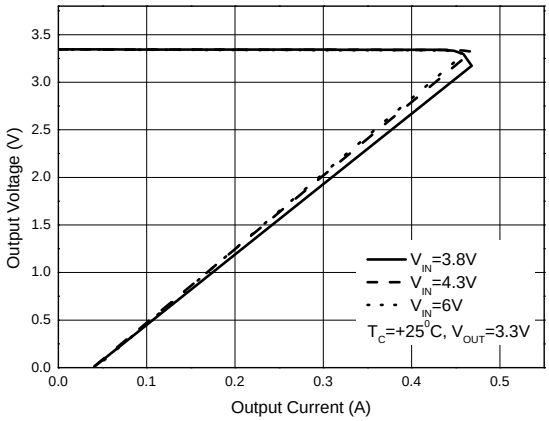
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_{REF}	Reference Voltage	V_{IN} = 3.0V, 1mA ≤ I_{OUT} ≤ 300mA		1.225	1.25	1.275	V
V_{IN}	Input Voltage	—		3.0	—	6	V
$I_{OUT(MAX)}$	Maximum Output Current	V_{IN} = 3.0V, V_{OUT} = 98% x V_{OUT}		300	400	—	mA
ΔV_{OUT} /(ΔI_{OUT}*V_{OUT})	Load Regulation	V_{IN} = 3.0V, 1mA ≤ I_{OUT} ≤ 300mA		—	—	0.6	%/A
ΔV_{OUT} /(ΔV_{IN}*V_{OUT})	Line Regulation	V_{IN} = 3.0V to 6V, I_{OUT} = 30mA		—	—	0.06	%/V
I_Q	Quiescent Current	V_{IN} = 3.0V, I_{OUT} = 0mA		—	60	90	µA
I_{STD}	Standby Current	V_{IN} = 3.0V, $V_{\overline{Shutdown}}$ in Off Mode		—	0.1	1.0	µA
PSRR	Power Supply Rejection Ratio	Ripple 1Vp-p V_{IN} = 3.5V	f = 100Hz	—	68	—	dB
			f = 1kHz	—	68	—	dB
			f = 10kHz	—	54	—	dB
(ΔV_{OUT}/V_{OUT}) /ΔT	Output Voltage Temperature Coefficient	I_{OUT} = 30mA, -40°C ≤ T_A ≤ +85°C		—	±100	—	ppm/°C
I_{SHORT}	Short Current Limit	V_{OUT} = 0V		—	50	—	mA
t_{UP}	Soft Start Time	—		—	50	—	µs
V_{NOISE}	RMS Output Noise	T_A = +25°C, 10Hz ≤ f ≤ 100kHz, V_{OUT} = 1.25V		—	80	—	µVrms
—	$\overline{Shutdown}$ "High" Voltage	$\overline{Shutdown}$ Input Voltage "High"		1.5	—	6	V
—	$\overline{Shutdown}$ "Low" Voltage	$\overline{Shutdown}$ Input Voltage "Low"		0	—	0.4	V
—	V_{OUT} Discharge MOSFET $R_{DS(ON)}$	$\overline{Shutdown}$ Input Voltage "Low"		—	60	—	Ω
—	$\overline{Shutdown}$ Pull Down Resistance	—		—	3	—	MΩ
—	Thermal Shutdown	—		—	+165	—	°C
—	Thermal Shutdown Hysteresis	—		—	+30	—	°C
θ_{JC}	Thermal Resistance	SOT-23-5		—	150	—	°C/W

Performance Characteristics

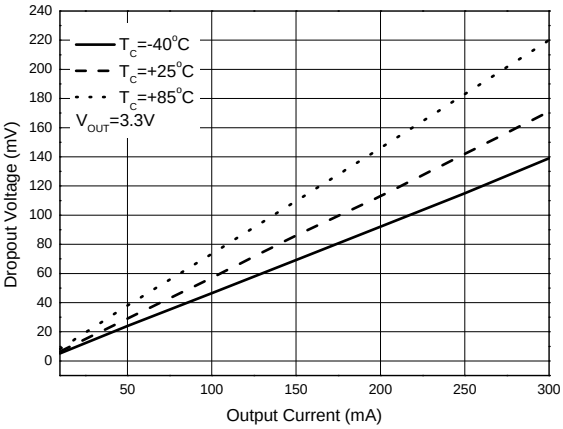
Output Voltage vs. Output Current



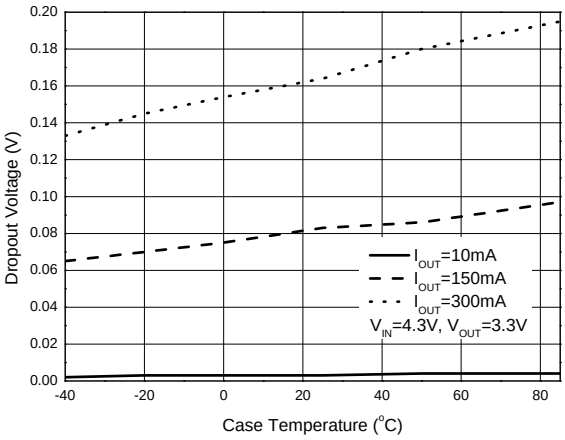
Output Voltage vs. Output Current



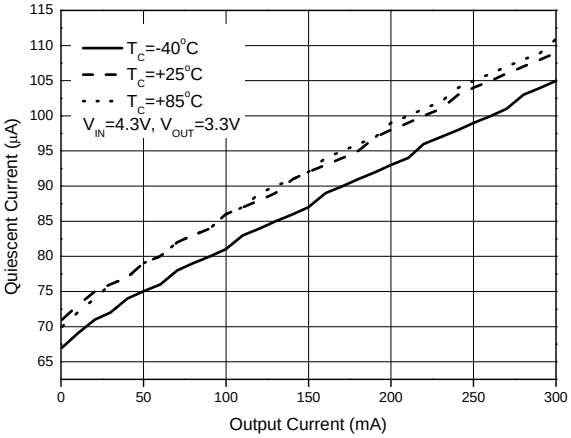
Dropout Voltage vs. Output Current



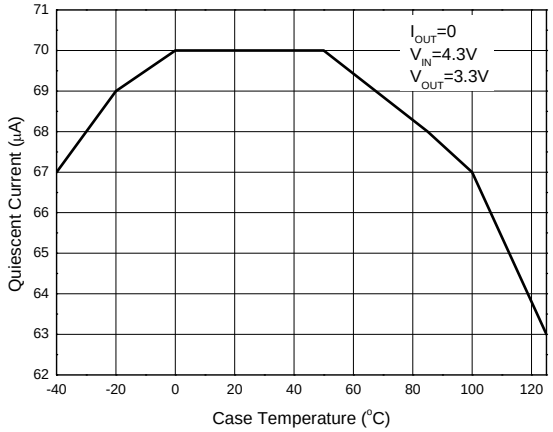
Dropout Voltage vs. Case Temperature



Quiescent Current vs. Output Current

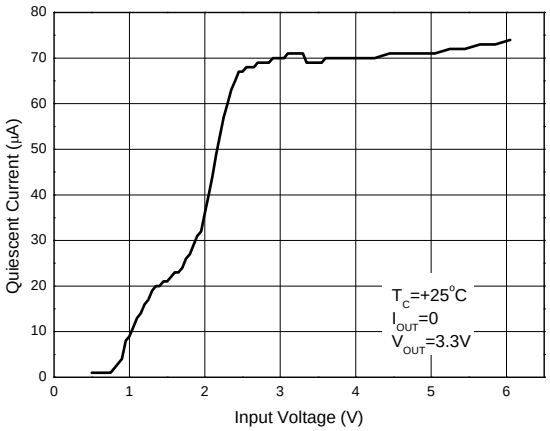


Quiescent Current vs. Case Temperature

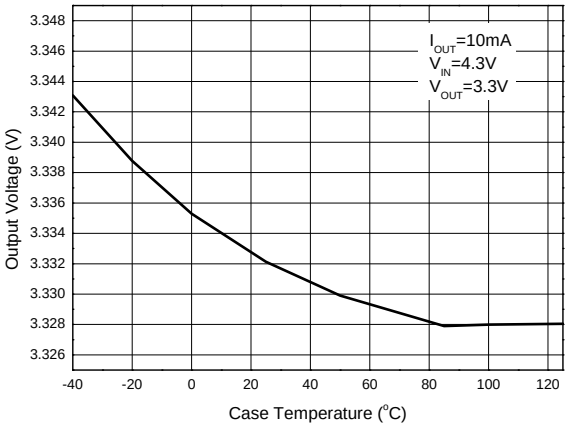


Performance Characteristics (Cont.)

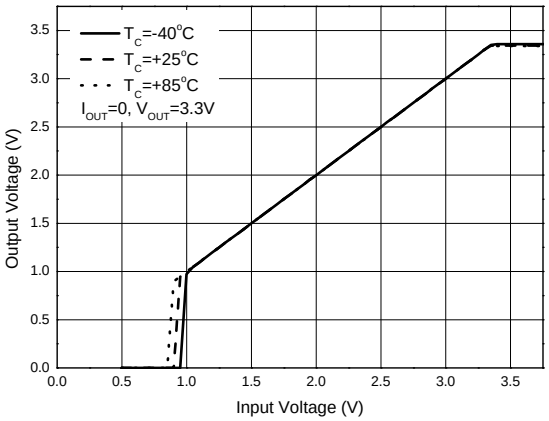
Quiescent Current vs. Input Voltage



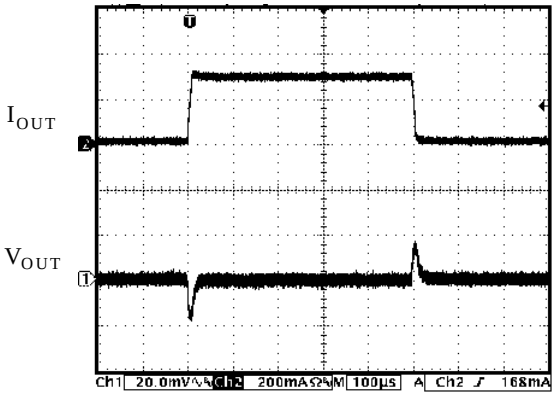
Output Voltage vs. Case Temperature



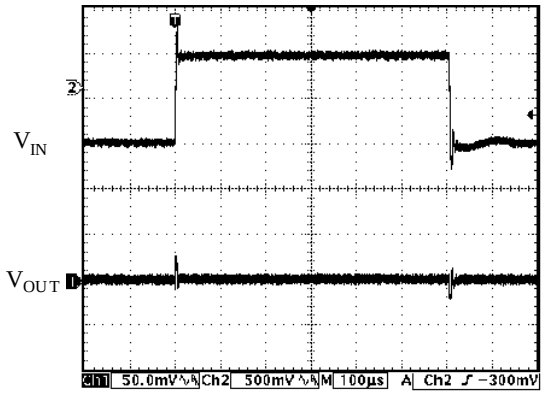
Output Voltage vs. Input Voltage



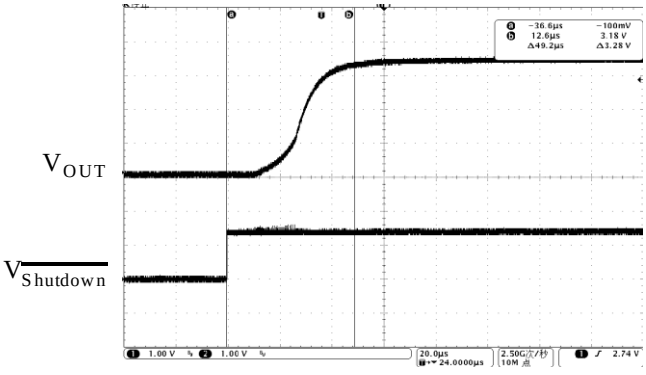
Load Transient
(Conditions: C_{IN}=C_{OUT}=1μF, V_{IN}=4.4V, V_{OUT}=3.3V I_{OUT}=10mA to 300mA)



Line Transient
(Conditions: I_{OUT}=30mA, C_{IN}=C_{OUT}=1μF, V_{IN}=4V to 5V, V_{OUT}=3.3V)

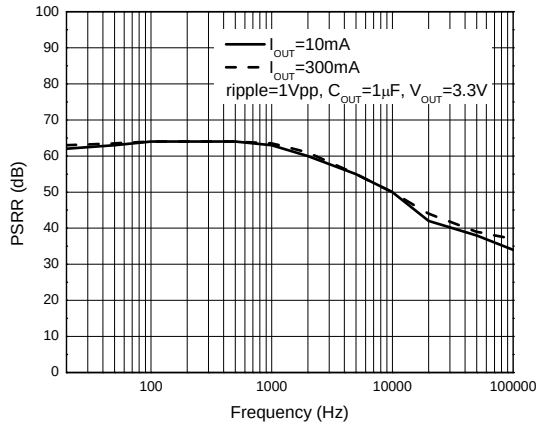


Soft Start Time
(Conditions: I_{OUT}=0mA, C_{IN}=C_{OUT}=1μF, $V_{\overline{Shutdown}}$=0 to 2V, V_{OUT}=3.3V)

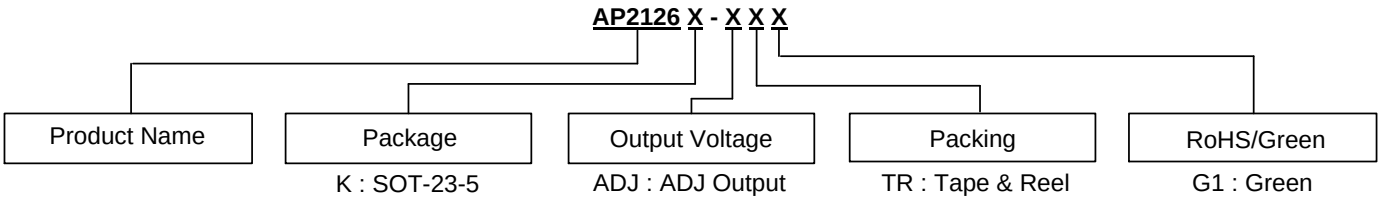


Performance Characteristics (Cont.)

PSRR vs. Frequency



Ordering Information

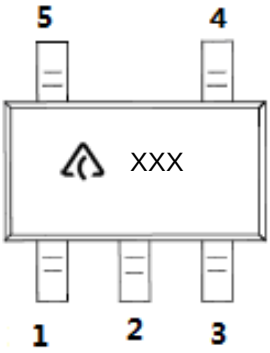


Package	Temperature Range	Part Number	Marking ID	Packing
SOT-23-5	-40 to +85°C	AP2126K-ADJTRG1	GHH	3000/Tape & Reel

Marking Information

(1) SOT-23-5

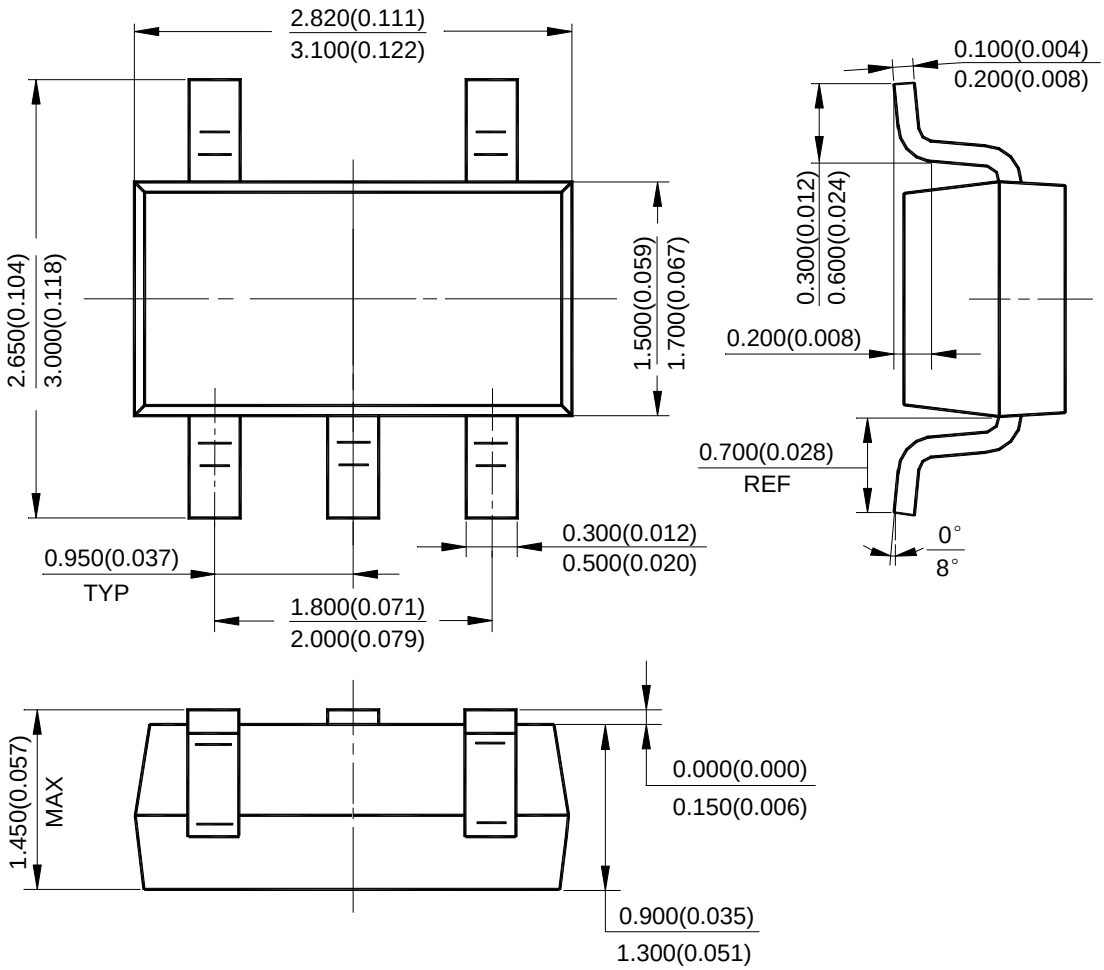
(Top View)



: Logo
XXX: Marking ID
(See Ordering Information)

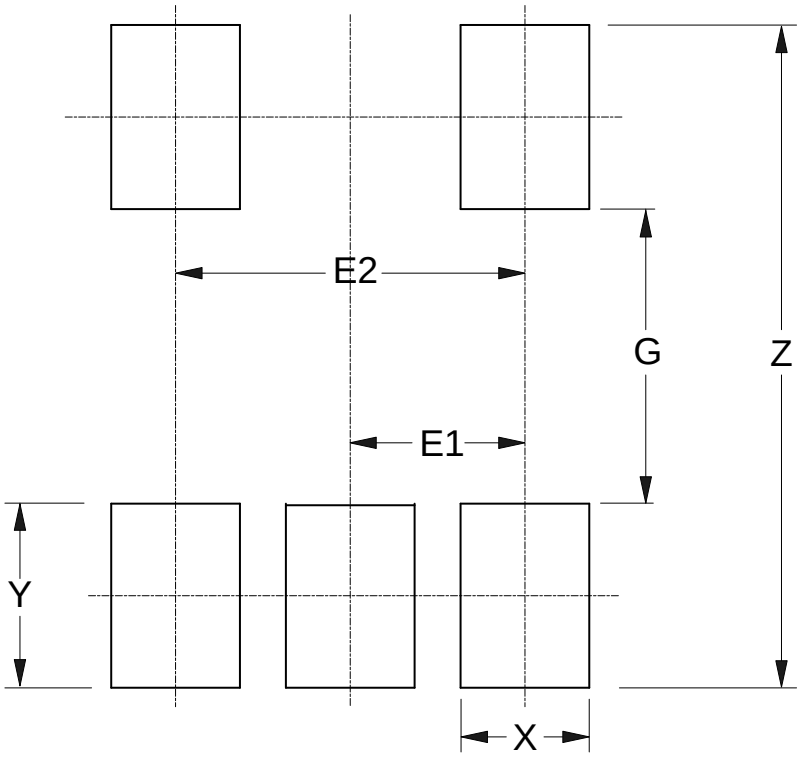
Package Outline Dimensions (All dimensions in mm(inch).)

(1) Package Type: SOT-23-5



Suggested Pad Layout

(1) Package Type: SOT-23-5



Dimensions	Z (mm)/(inch)	G (mm)/(inch)	X (mm)/(inch)	Y (mm)/(inch)	E1 (mm)/(inch)	E2 (mm)/(inch)
Value	3.600/0.142	1.600/0.063	0.700/0.028	1.000/0.039	0.950/0.037	1.900/0.075

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