

Drag force of circula drag parachute						
drag force of parachute	equals	multiply by 1/2	Air density	Air Speed squared	drag coefficient	Surface area of the parachute
Fdrag	=	0.5	P	V^2	Cd	S
num	?	0.5	1.225	6	0.75	?
units			kg/m^3	m/s		m^2

meaning
formula

num

units

Only required if above Sea Level				
Local Air density	equals	absoulte pressure	Gas constant for dry air	absoulte temperature at this altitude
P	=	P	R	T
?		?	287.058	?
kg/m^3		N	j/(kg-K)	K

meaning
formula

num

units

Constant Velocity when force drag equals force of gravity							
Mass of chute + CanSat	PULL of gravity	equals	multiply by 1/2	Air density	Air Speed (velocity)squared	drag coefficient	Surface area of the parachute
M	G	=	0.5	P	V^2	Cd	S
0.3	9.8067		0.5	1.225	6	0.75	?
kg	m/s^2			kg/m^3	m/s		m^2

meaning
formula

num

units

Calulate the surface area of a circular parachute meters squared							
Surface area of the parachute	equals	Mass of chute + CanSat	PULL of gravity	multiply by 1/2	drag coefficient	Air density	Air Speed (velocity)squared
S	=	M	G	0.5	Cd	P	V^2
?		0.3	9.80665	0.5	0.75	1.225	6
m^2		kg	m/s^2			kg/m^3	m/s

meaning
formula

num

units

Circula
Surface area

1.067390476

diamator = 1.165789

area of a circle Pi R^2

A circle has about 80% the area of a similar width square

square area = w^2

Circle area = (pi/4)*w^2