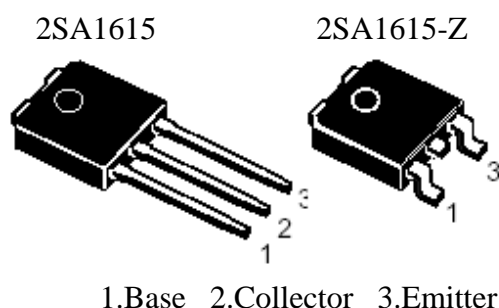


The 2SA1615 and 1615-Z are available for the large current control in small due to the low saturation and are ideal for high-efficiency DC/DC converters due to the fast switching speed.

**PIN CONFIGURATION****FEATURE**

- Large current capacity:  
I<sub>C(DC)</sub>: -10A, I<sub>C(pulse)</sub>: -15A
- High h<sub>FE</sub> and low collector saturation voltage :  
h<sub>FE</sub> = 200 MIN (@ V<sub>ec</sub> = -2V, I<sub>c</sub> = -0.5A)  
V<sub>CE(sat)</sub> -0.25V (@ I<sub>c</sub> = -4.0A, I<sub>B</sub> = -0.05A)

**ABSOLUTE MAXIMUM RATINGS (Ta = 25 )**

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to base voltage	V <sub>CB0</sub>	-30	V
Collector to emitter voltage	V <sub>CEO</sub>	-20	V
Emitter to base voltage	V <sub>EBO</sub>	-10	V
Collector current (DC)	I <sub>c</sub> (DC)	-10	A
Collector current (pulse)	I <sub>c</sub> (pulse)*	-15	A
Base current (DC)	I <sub>B</sub> (DC)	-0.5	A
Total power dissipation	P <sub>T</sub> (Ta = 25 )**	1.0	W
Total power dissipation	P <sub>T</sub> (Tc = 25 )	15	W
Junction temperature	T <sub>j</sub>	150	
Storage temperature	T <sub>stg</sub>	-55 to +150	

\*PW 10ms, duty cycle 50%

\*\*Printing board mounted

**STANSON TECHNOLOGY**

120 Bentley Square, Mountain View, Ca 94040 USA  
TEL: (650) 9389294 FAX: (650) 9389295

**ELECTRICAL CHARACTERISTICS ( Ta=25 )**

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Collector cutoff current	ICBO	V <sub>CB</sub> = -20V, I <sub>E</sub> = 0			-1.0	uA
Emitter cutoff current	IEBO	V <sub>EB</sub> = -8.0, I <sub>c</sub> = 0			-1.0	uA
DC current agin	hFE1*	V <sub>CE</sub> = -2.0V, I <sub>c</sub> = -0.5A	200		600	
CC current agin	hFE2*	V <sub>CE</sub> = -2.0V, I <sub>c</sub> = -4.0A	160			
Collector saturation voltage	V <sub>CE(sat)</sub> *	I <sub>c</sub> = -4.0A, I <sub>B</sub> = -0.05A		-0.2	-0.25	V
Base saturation voltage	V <sub>BE(sat)</sub> *	I <sub>c</sub> = -4.0A, I <sub>B</sub> = -0.05A		-0.9	-1.2	V
Gain bandwidth voltage	ft	V <sub>CE</sub> = -0.5V, I <sub>E</sub> = 1.5A		180		MHz
Output capacity	Cob	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0, f = 1.0MHz		220		pF
Turn-on time	ton	I <sub>c</sub> = -5.0A, I <sub>B1</sub> = -I <sub>B2</sub> = -0.125A R <sub>L</sub> = 2.0ohm, V <sub>cc</sub> = -10V		80		ns
Storage time	tstg			300		ns
Fall time	tr			60		ns

\* Pulse test PW 350uA, duty cycle 2%

**hFE CLADDIFICATION**

Marking	L	K
hFE2	200 to 400	300 to 600



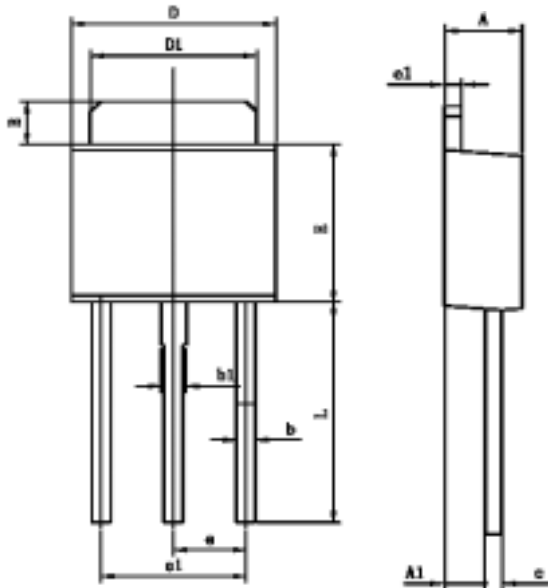
**STANSON TECHNOLOGY**

120 Bentley Square, Mountain View, Ca 94040 USA  
 TEL: (650) 9389294 FAX: (650) 9389295

-10A

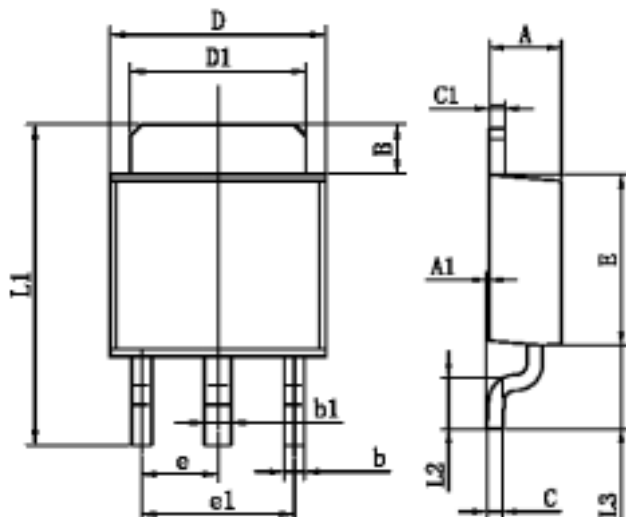
PACKAGE DRAWING ( unit: mm )

2SA1615



Symbol	Dimensions In Millimeters	
	Min	Max
A	2.200	2.400
A1	1.020	1.270
B	1.350	1.650
b	0.500	0.700
b1	0.700	0.900
c	0.430	0.580
c1	0.430	0.580
D	6.350	6.650
D1	5.200	5.400
E	5.400	5.700
e	2.300TYP	
e1	4.500	4.700
L	7.500	7.900

2SA1615-Z



Symbol	Dimensions In Millimeters	
	Min	Max
A	2.200	2.400
A1	0.000	0.127
B	1.350	1.650
b	0.500	0.700
b1	0.700	0.900
c	0.430	0.580
c1	0.430	0.580
D	6.350	6.650
D1	5.200	5.400
E	5.400	5.700
e	2.300TYP	
e1	4.500	4.700
L1	9.500	9.900
L2	1.400	1.780
L3	2.550	2.900
V	3.80REF	



**STANSON TECHNOLOGY**

120 Bentley Square, Mountain View, Ca 94040 USA

TEL: (650) 9389294 FAX: (650) 9389295

-10A

TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

