

# WNT2K36

Single, NPN, 60V, 1A, Power Transistor

## Descriptions

Low frequency power amplifier complementary pair with WPT2K37.



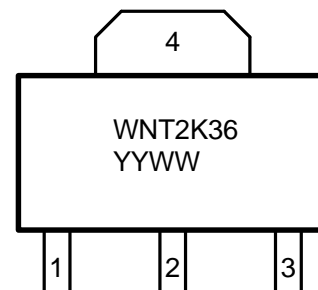
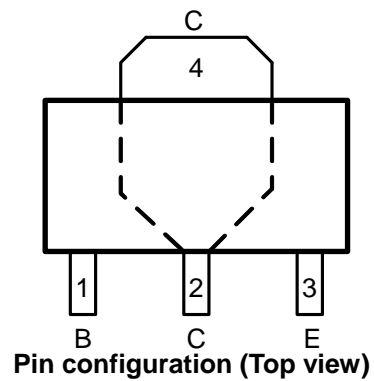
SOT-89-3L

## Features

- Ultra low collector-to-emitter saturation voltage
- High DC current gain >100
- 1A continue collector current
- Small package SOT-89-3L.

## Applications

- Charging circuit
- Power regulator
- Linear amplifier
- Other power management



**WNT2K36** = Device code  
**YY** = Year  
**WW** = Week  
**Marking**

## Order information

Device	Package	Shipping
WNT2K36-3/TR	SOT-89-3L	1000/Reel&Tape

**Absolute maximum ratings**

Parameter	Symbol	Value	Unit
Collector-emitter voltage	$V_{CEO}$	60	V
Collector-base voltage	$V_{CBO}$	80	V
Emitter-base voltage	$V_{EBO}$	8	V
Continues collector current <sup>a</sup>	$I_C$	2	A
Continues collector current <sup>b</sup>		1	A
Pulse collector current <sup>c</sup>	$I_{CM}$	6	A
Power dissipation <sup>a</sup>	$P_D$	1	W
Power dissipation <sup>b</sup>		0.5	W
Junction Temperature	$T_J$	150	°C
Lead Temperature	$T_L$	260	°C
Storage Temperature Range	$T_{stg}$	-55~150	°C

a Surface mounted on FR-4 Board using 1 square inch pad size, 1oz copper

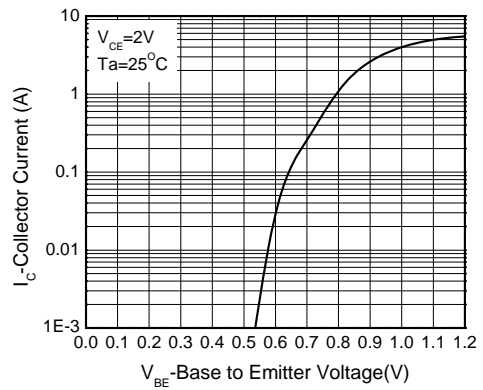
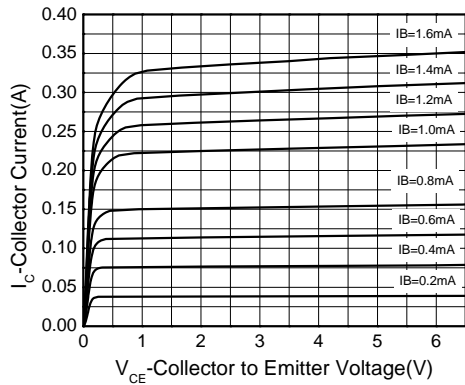
b Surface mounted on FR-4 board using minimum pad size, 1oz copper

c Pulse width=300μs, Duty Cycle<2%

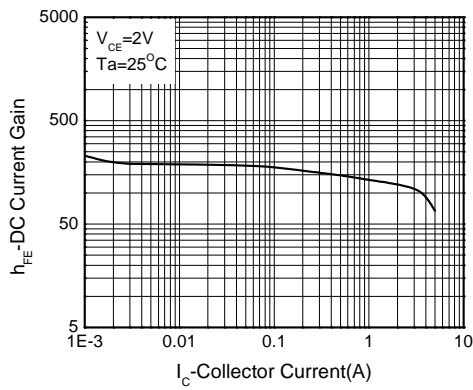
**Electronics Characteristics (Ta=25°C, unless otherwise noted)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C=10mA, I_B=0mA$	60			V
Collector-base breakdown voltage	$BV_{CBO}$	$I_C=100uA, I_E=0mA$	80			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E=1mA, I_C=0mA$	8			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=70V, I_E=0mA$		2.5	100	nA
Emitter cutoff current	$I_{EBO}$	$V_{BE}=8V, I_C=0mA$		0.1	100	nA
Collector-emitter saturation voltage <sup>c</sup>	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$			0.4	V
Base-emitter saturation voltage <sup>c</sup>	$V_{BE(sat)}$	$I_C=500mA, V_{CE}=2V$			1.1	V
DC current gain <sup>c</sup>	$h_{FE}$	$I_C=500mA, V_{CE}=2V$	60	150	320	
DC current gain <sup>c</sup>	$h_{FE}$	$I_C=50mA, V_{CE}=2V$	100	180	320	

Typical Characteristics (Ta=25°C, unless otherwise noted)

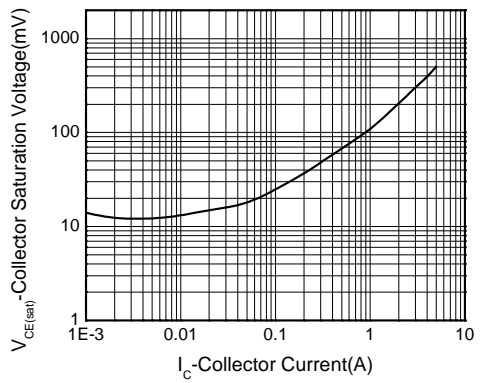


Output characteristics

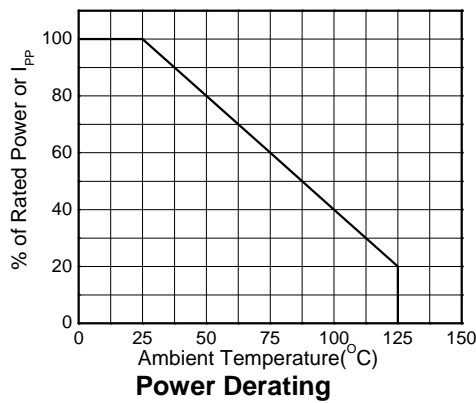


DC current gain

Transfer characteristics



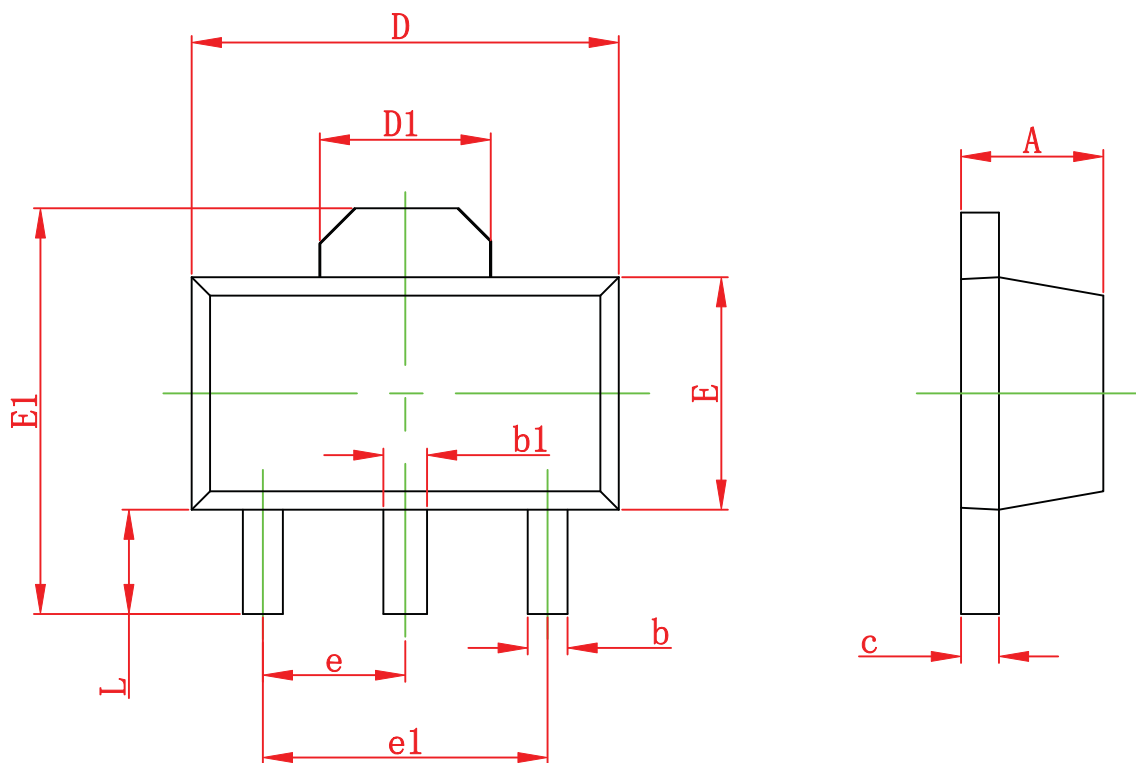
C-E saturation voltage vs. Collector current



Power Derating

Package outline dimensions

SOT-89-3L



Symbol	Dimensions in Millimeters	
	Min.	Max.
A	1.400	1.600
B	0.320	0.520
b1	0.400	0.580
C	0.350	0.440
D	4.400	4.600
D1	1.550 Ref.	
E	2.300	2.600
E1	3.940	4.250
E	1.500 Typ.	
e1	3.000 Typ.	
L	0.900	1.200