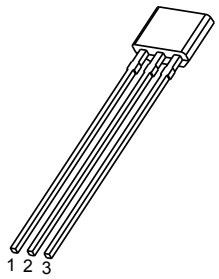
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92S Plastic-Encapsulate Transistors

2SC2668 TRANSISTOR (NPN)

TO-92S

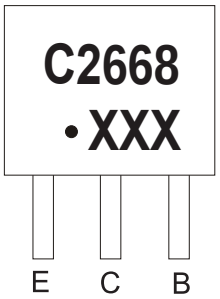
1. EMITTER
2. COLLECTOR
3. BASE



FEATURES

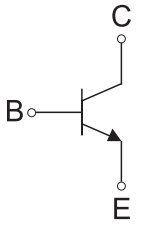
- Small Reverse Transfer Capacitance
- Low Noise Figure

MARKING



C2668=Device code
Soliddot = Greenmdding compound device, if none, the normal device
XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SC2668	TO-92S	Bulk	1000pcs/Bag
2SC2668-TA	TO-92S	Tape	3000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	20	mA
P_C	Collector Power Dissipation	200	mW
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS

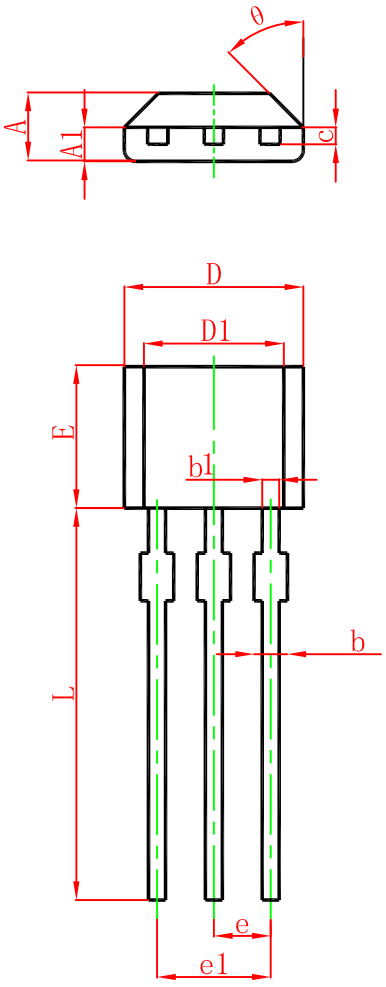
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =100μA, I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =1mA, I_B=0	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	4			V
Collector cut-off current	I_{CBO}	V_{CB}=40V, I_E=0			0.5	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			0.5	μA
DC current gain	h_{FE}	V_{CE}=6V, I_C=1mA	40		200	
Reverse Transfer Capacitance	C_{re}	V_{CE}=6V, f=1MHz		0.7		pF
Collector-Base Time Constant	Cc • rbb'	V_{CE}=6V, I_E=-1mA, f=30MHz			30	ps
Transition frequency	f_T	V_{CE}=6V, I_C=1mA		550		MHz
Power Gain	Gpe	V_{CC}=6V, I_C =1mA, f=100MHz		18		dB
Noise figure	NF	V_{CC}=6V, I_C =1mA, f=100MHz			5	dB

CLASSIFICATION OF h_{FE}

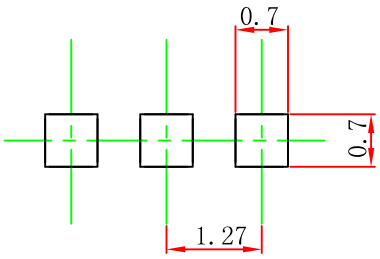
Rank	**R**	**O**	**Y**
Range	40-80	70-140	100-200

TO-92S Package Outline Dimensions



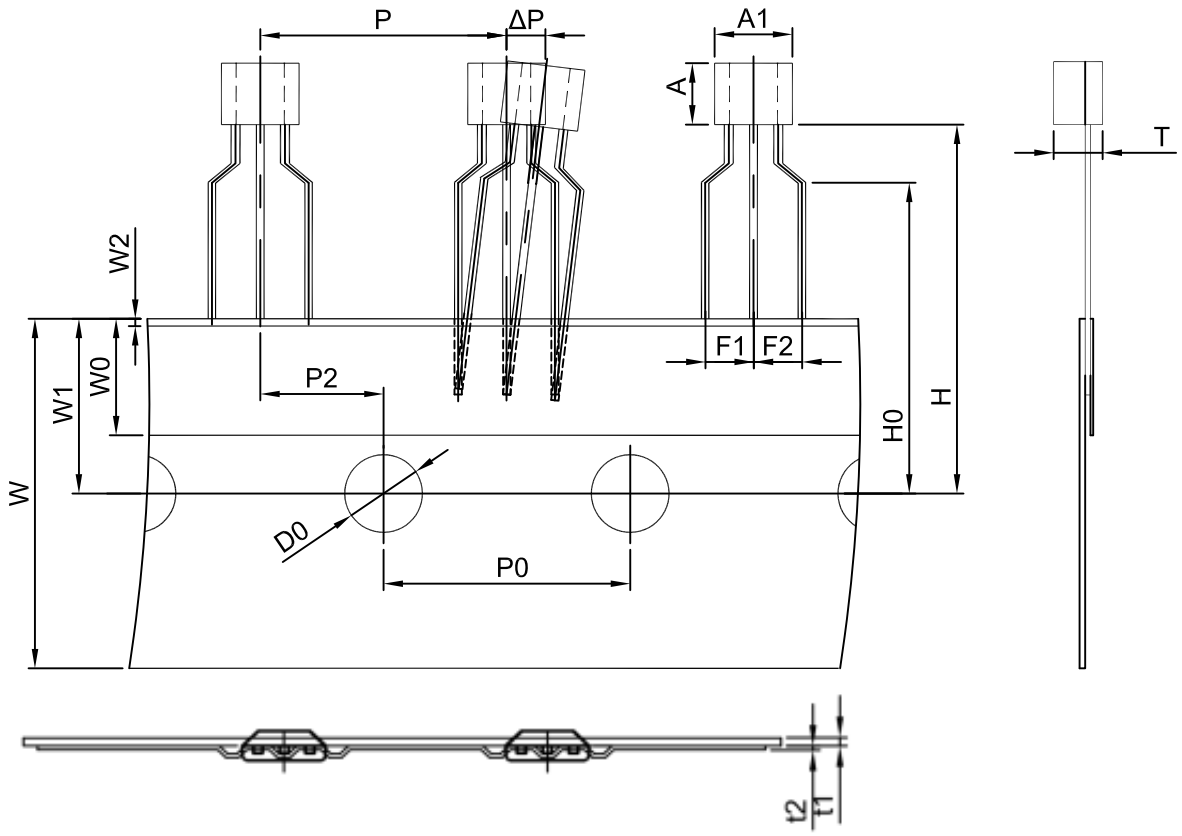
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.420	1.620	0.056	0.064
A1	0.660	0.860	0.026	0.034
b	0.330	0.480	0.013	0.019
b1	0.400	0.510	0.016	0.020
c	0.330	0.510	0.013	0.020
D	3.900	4.100	0.154	0.161
D1	2.280	2.680	0.090	0.106
E	3.050	3.250	0.120	0.128
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	15.100	15.500	0.594	0.610
θ	45° TYP.		45° TYP.	

TO-92S Suggested Pad Layout

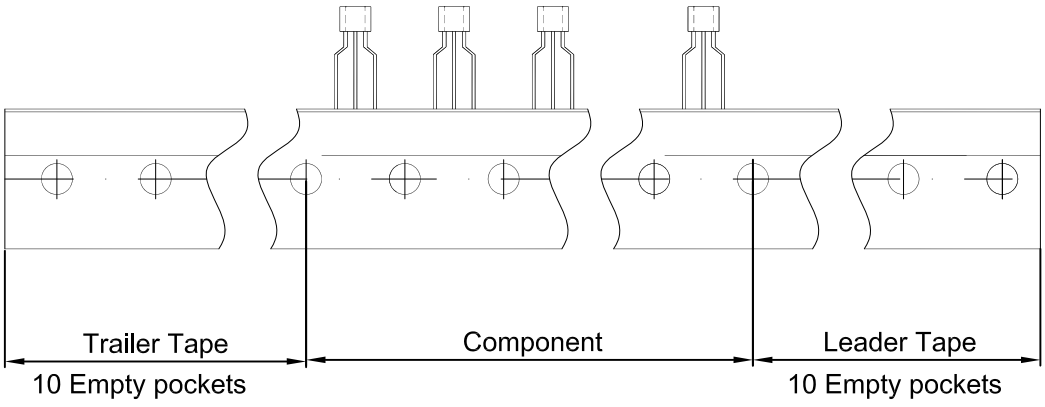


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

TO-92S PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.0	3.15	1.52	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92S	3000 pcs	333×162×43	30,000 pcs	350×340×250