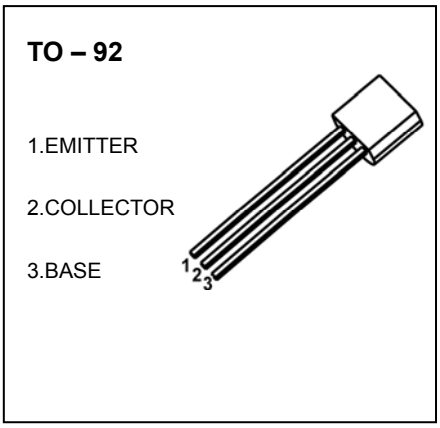
TO-92 Plastic-Encapsulate Transistors

STBV32/B TRANSISTER (NPN)



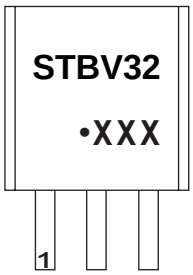
FEATURES

- Medium Voltage Capability
- Low Spread of Dynamic Parameters
- Minimum Lot-to-lot Spread for Reliable Operation
- Very High Switching Speed

APPLICATIONS

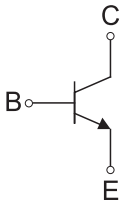
- Electronic Ballasts for Fluorescent Lighting

MARKING



STBV32=Device code
Solid dot = Green molding compound device, if none, the normal device
XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
STBV32/B	TO-92	Bulk	1000pcs/Bag
STBV32/B-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	1.1	W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	114	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS

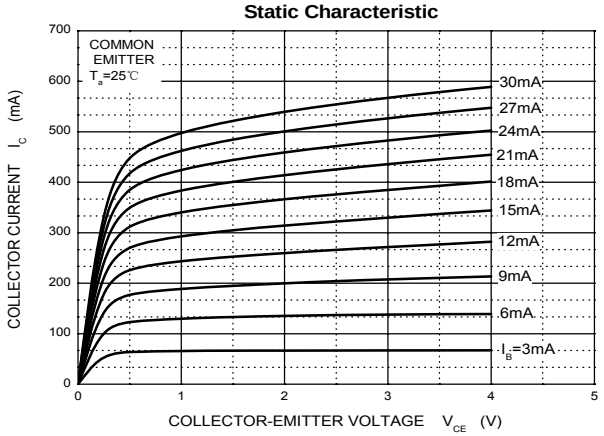
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$*	I_C=1mA, I_E=0	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=10mA, I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10mA, I_C=0	9			V
Collector cut-off current	I_{CEO}	V_{BE}=-1.5V, V_{CE}=700V			1	mA
Emitter cut-off current	I_{EBO}	V_{EB}=7V, I_C=0			100	μA
DC current gain	$h_{FE(1)}$*	V_{CE}=2V, I_C=0.5A	8		35	
	$h_{FE(2)}$*	V_{CE}=2V, I_C=1A	5		25	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$*	I_C=0.5A, I_B=0.1A			0.5	V
	$V_{CE(sat)(2)}$*	I_C=1 A, I_B=0.25A			1	V
	$V_{CE(sat)(3)}$*	I_C=1.5A, I_B=0.5A			1.5	V
Base-emitter saturation voltage	$V_{BE\ (sat)(1)}$*	I_C=0.5A, I_B=0.1A			1	V
	$V_{BE\ (sat)(2)}$*	I_C=1A, I_B=0.25A			1.2	V

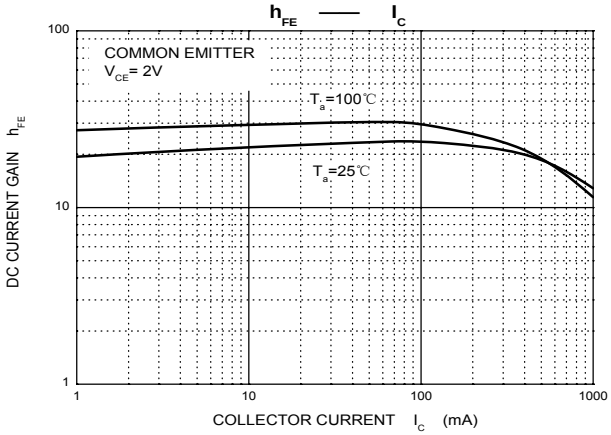
*Pulse test: pulse width ≤300μs, duty cycle≤ 1.5%.

Typical Characteristics STBV32/B

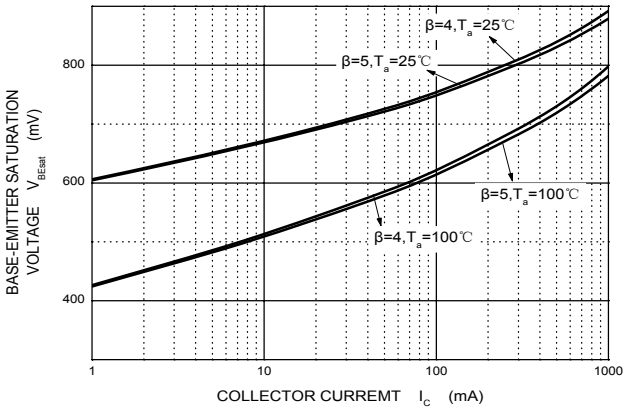
Static Characteristic



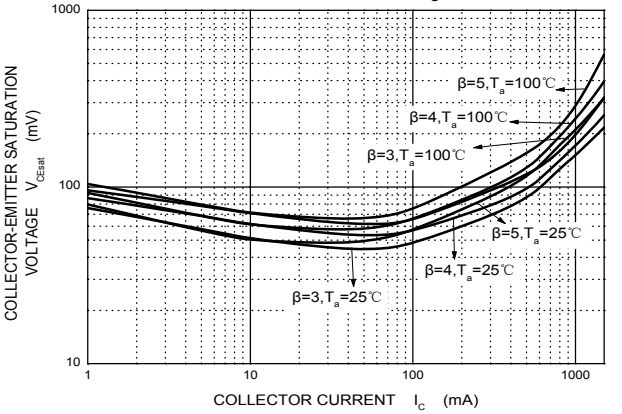
h_{FE} —— I_C



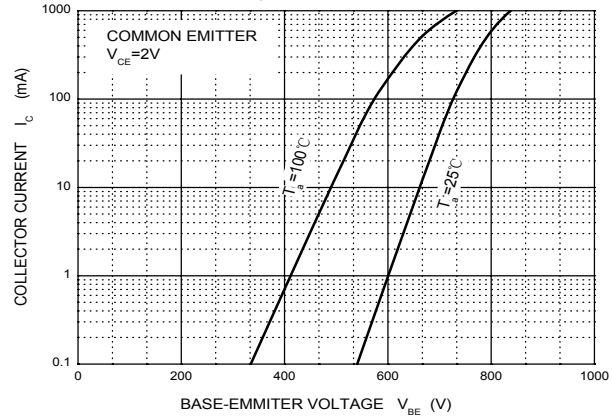
V_{BEsat} —— I_c



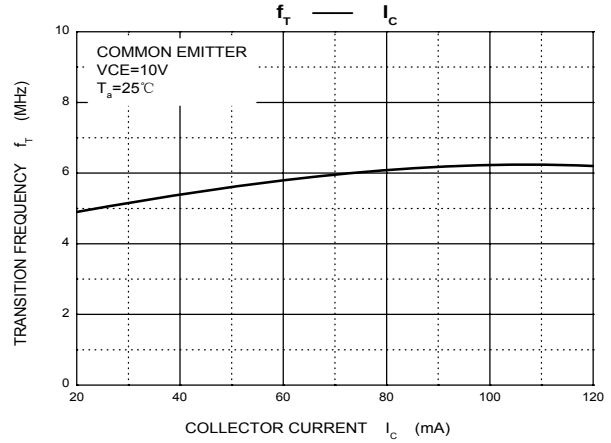
V_{CEsat} —— I_C



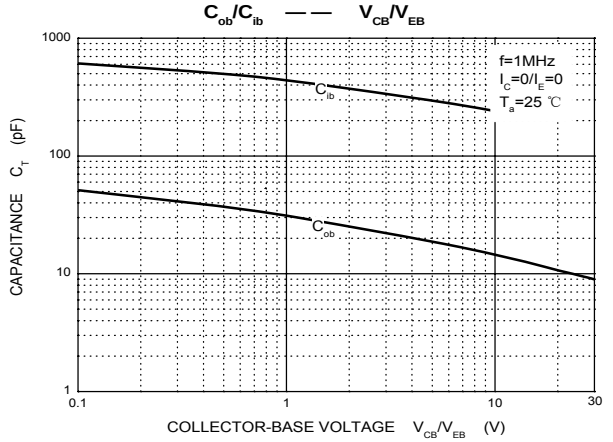
I_C —— V_{BE}



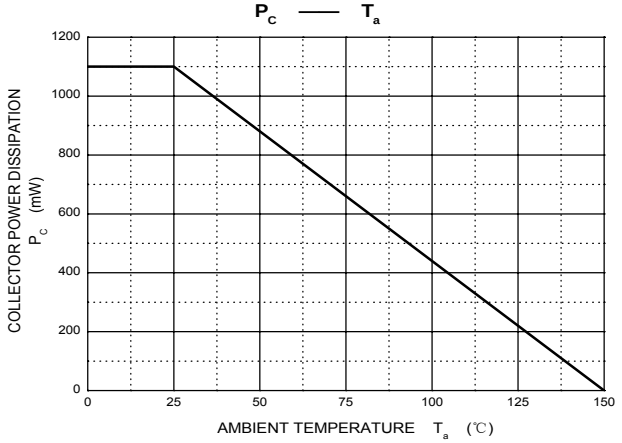
f_T —— I_C



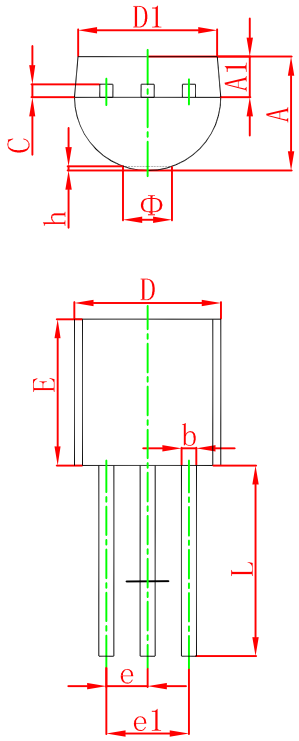
C_{ob}/C_{ib} —— V_{CB}/V_{EB}



P_C —— T_a

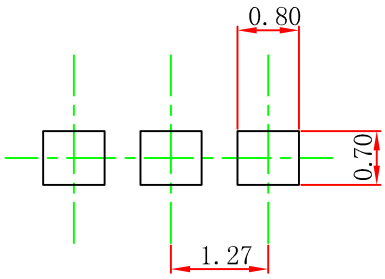


TO-92 Package Outline Dimensions



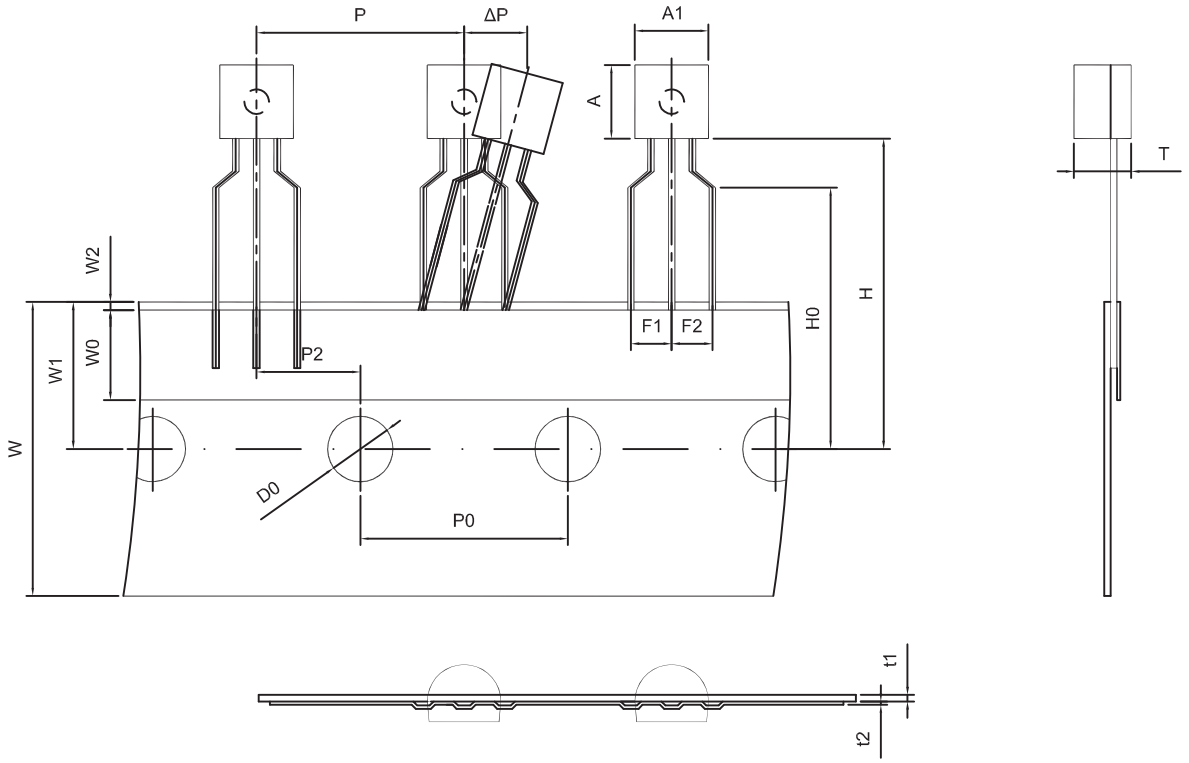
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Suggested Pad Layout

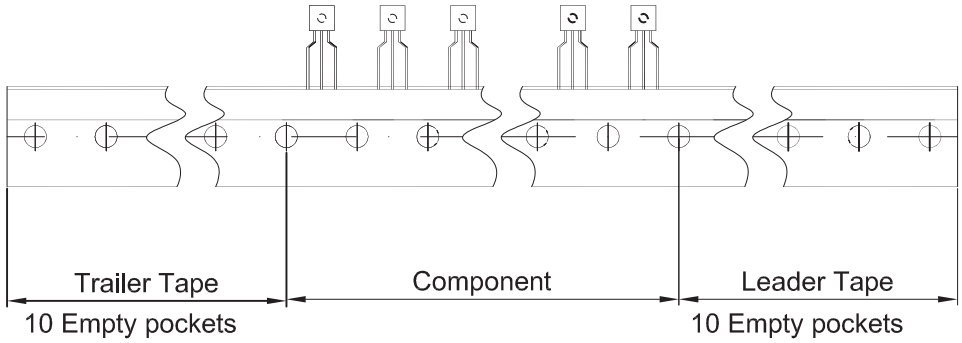


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	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 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250