

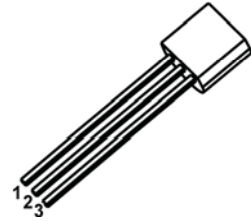
TRANSISTOR (NPN)

**FEATURES**

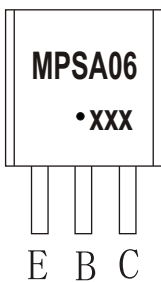
- Power amplifier

**TO-92**

1. EMITTER
2. BASE
3. COLLECTOR

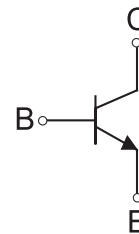


**MARKING**



MPSA06=Device code  
Solid dot=Green molding compound device,  
if none,the normal device  
XXX=Code

**Equivalent Circuit**



**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

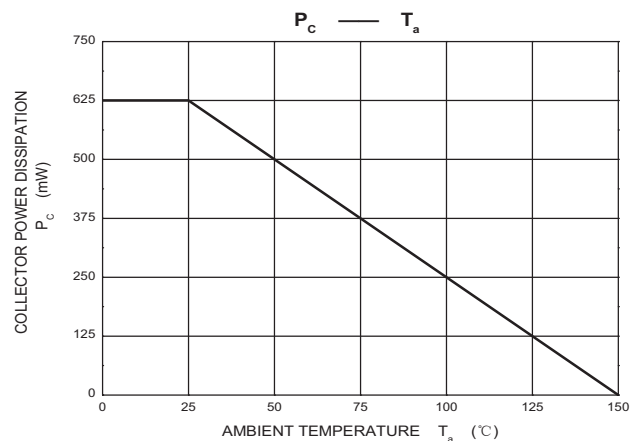
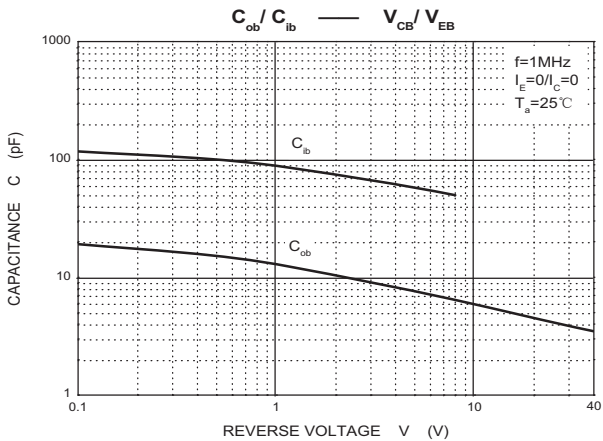
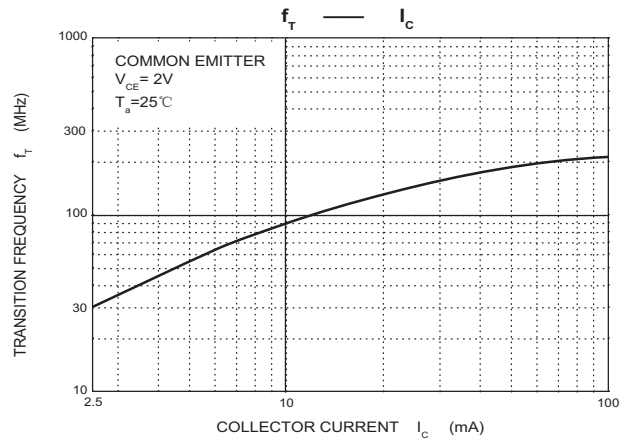
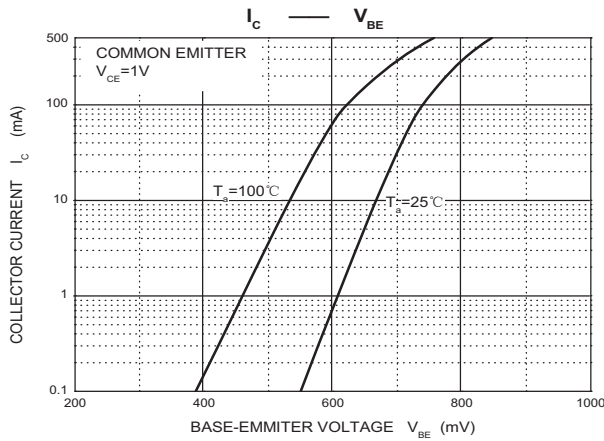
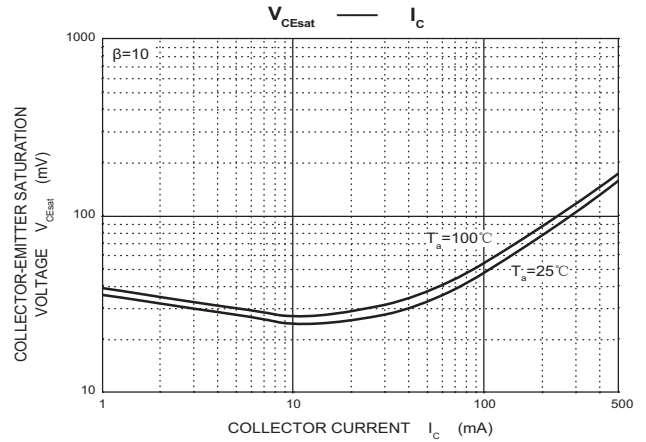
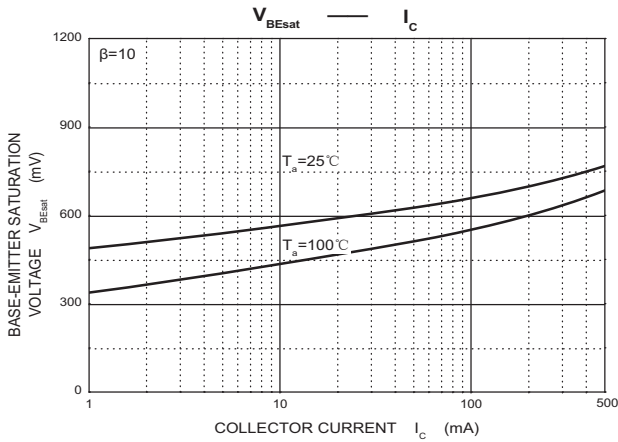
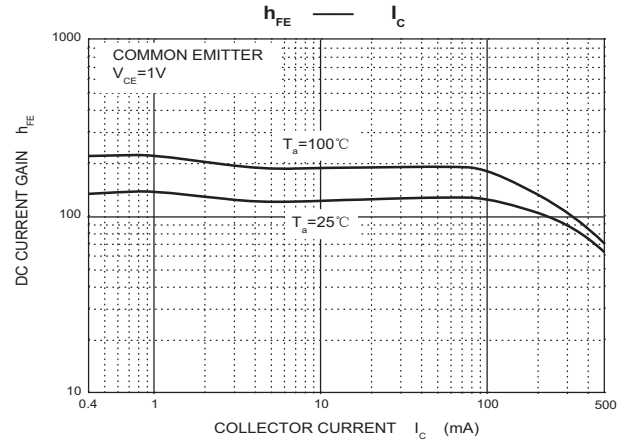
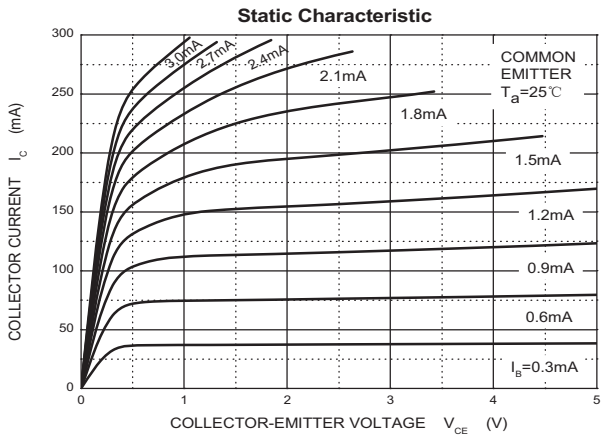
Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	80	V
V <sub>CEO</sub>	Collector-Emitter Voltage	80	V
V <sub>EBO</sub>	Emitter-Base Voltage	4	V
I <sub>C</sub>	Collector Current -Continuous	0.5	A
P <sub>D</sub>	Collector Power Dissipation	625	mW
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	200	°C /W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

2019-12/02/08  
REV:A

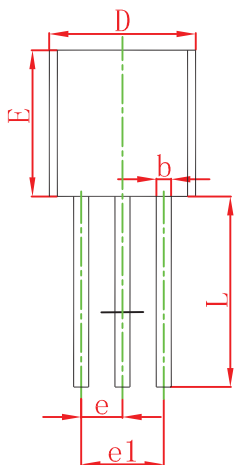
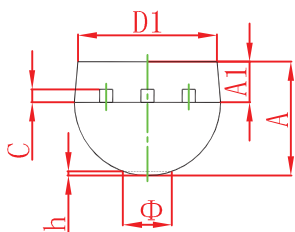
## ELECTRICAL CHARACTERISTICS $T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$ , $I_E=0$	80		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$ , $I_B=0$	80		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}$ , $I_C=0$	4		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=80\text{V}$ , $I_E=0$		0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=60\text{V}$ , $I_B=0$		0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=3\text{V}$ , $I_C=0$		0.1	$\mu\text{A}$
DC current gain	$h_{FE1}$	$V_{CE}=1\text{V}$ , $I_C=100\text{mA}$	100	400	
	$h_{FE2}$	$V_{CE}=1\text{V}$ , $I_C=10\text{mA}$	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$ , $I_B=10\text{mA}$		0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100\text{mA}$ , $I_B=10\text{mA}$		1.2	V
Transition frequency	$f_T$	$V_{CE}=2\text{V}$ , $I_C=10\text{mA}$ $f=100\text{MHz}$	100		MHz

# RATING AND CHARACTERISTICS CURVES (MPSA06)

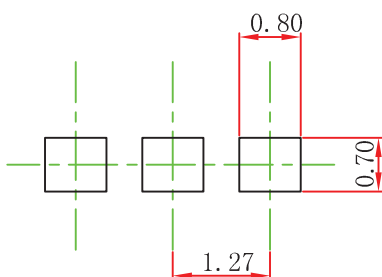


## TO-92 Package Outline Dimensions



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

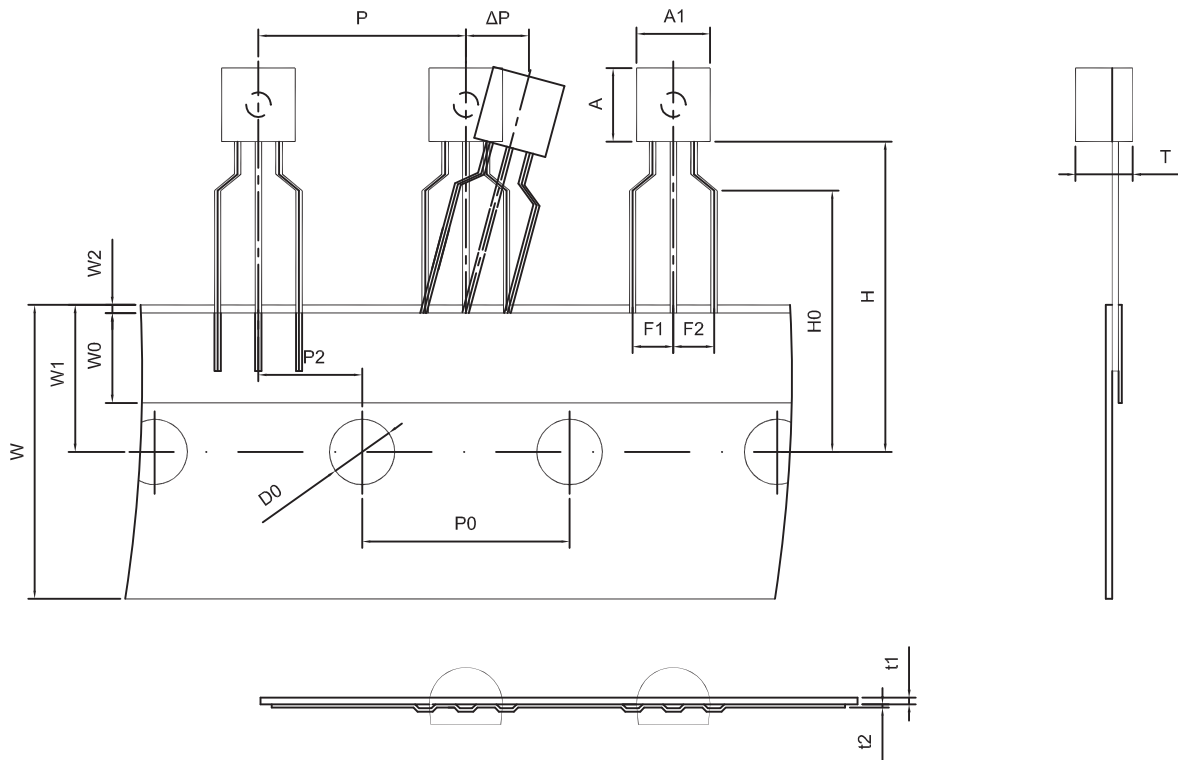


### Note:

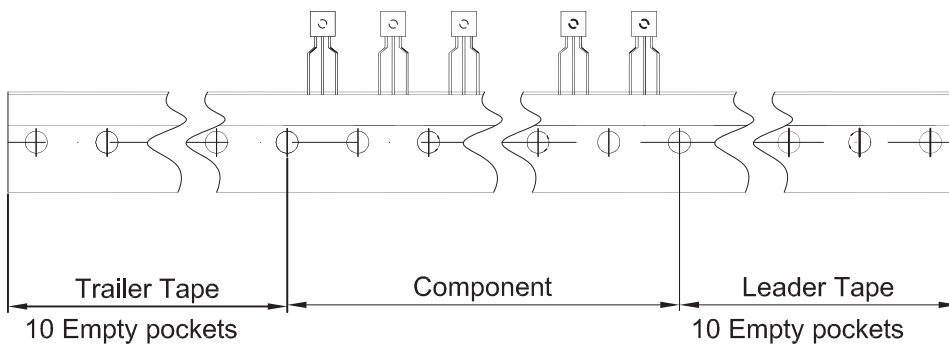
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

# TO-92 Tape and Reel

## TO-92 PACKAGE TAPING DIMENSION



Dimensions 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



## PACKAGING OF DIODE

PACKAGE	PACKAGE CODE	EA PER BAG	BOX SIZE (mm)	EA PER BOX	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
TO-92	-B	1,000	214*165*52	2,000	353*226*290	20,000	---

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.

