RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

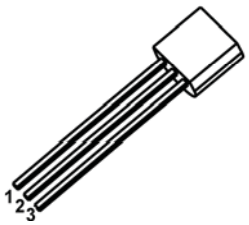
MPSA06

TRANSISTOR (NPN)

FEATURES

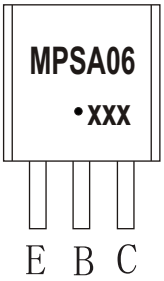
- Power amplifier

TO-92



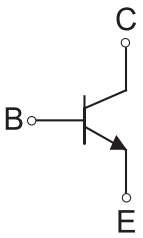
1. EMILTTER
2. BASE
3. COLLECTOR

MARKING



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

Equivalent Circuit



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	0.5	A
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	℃ /W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

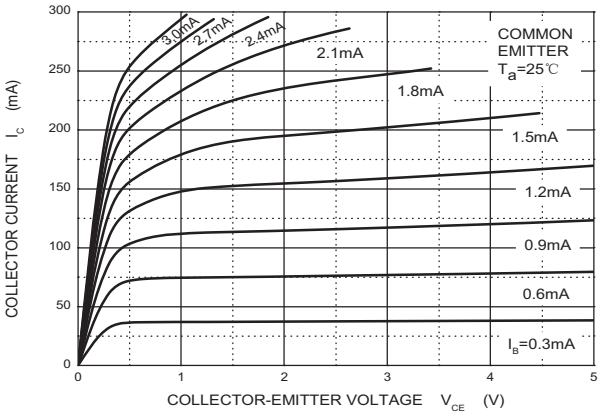
2019-12/02/08
REV:A

ELECTRICAL CHARACTERISTICS T_a=25℃ unless otherwise specified

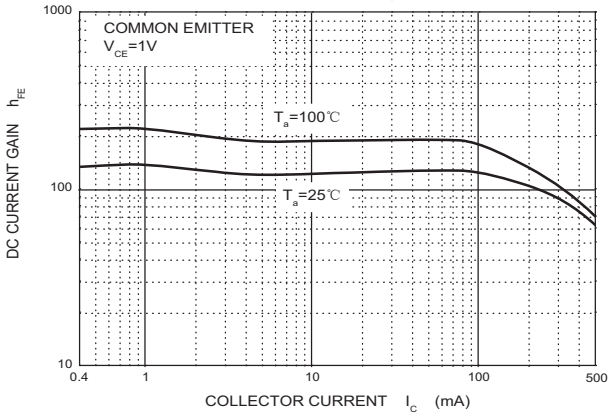
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	80		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1mA , I_B=0	80		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	4		V
Collector cut-off current	I_{CBO}	V_{CB}=80V,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

RATING AND CHARACTERISTICS CURVES (MPSA06)

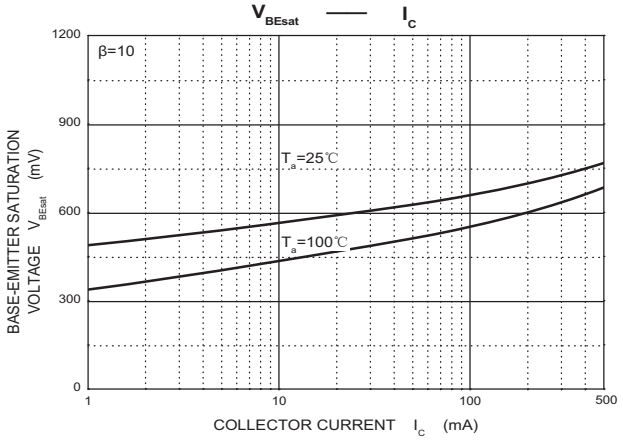
Static Characteristic



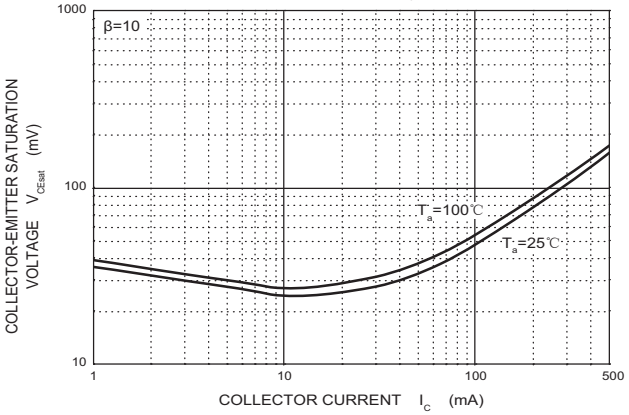
h_{FE} —— I_C



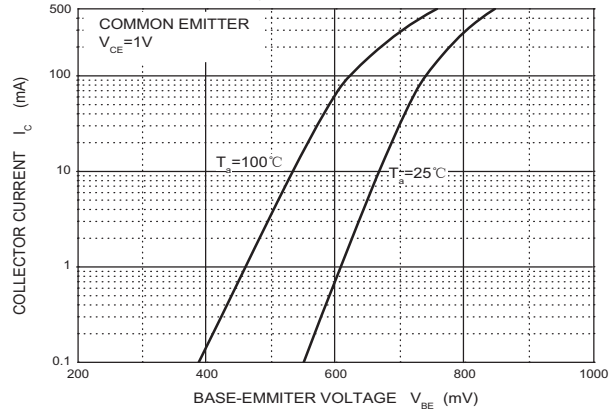
V_{BEsat} —— I_C



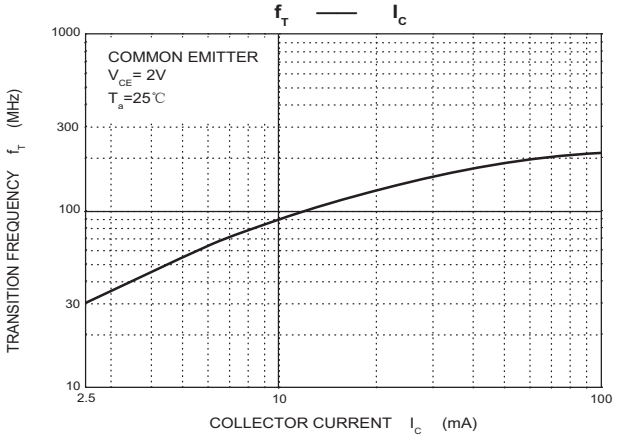
V_{CEsat} —— I_C



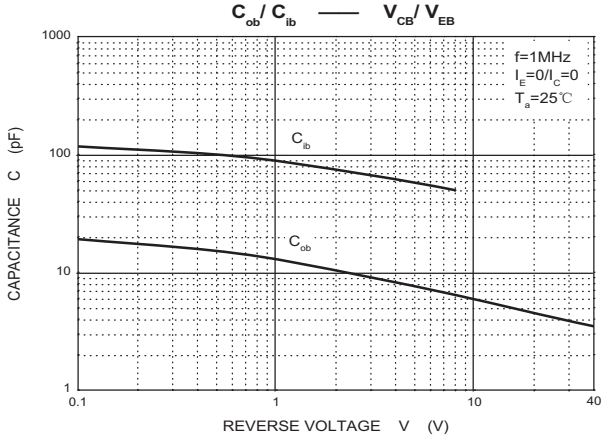
I_C —— V_{BE}



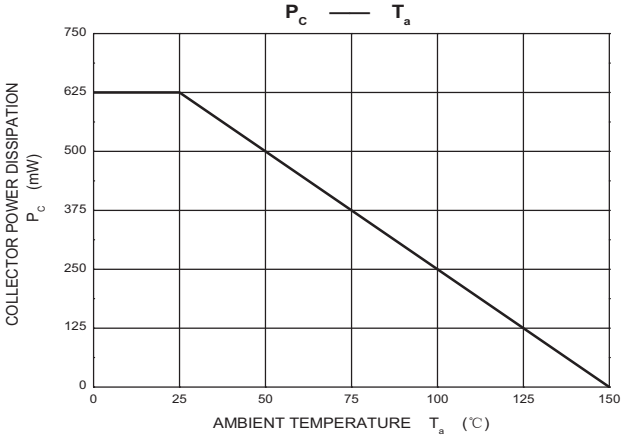
f_T —— I_C



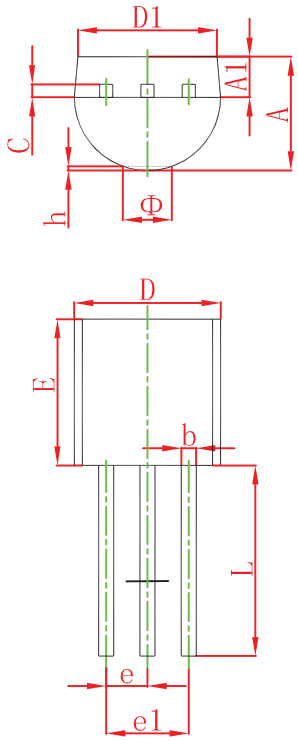
C_{ob} / C_{ib} —— V_{CB} / V_{EB}



P_C —— T_a

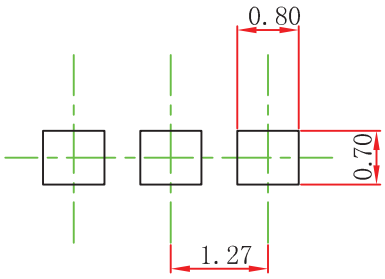


TO-92 Package Outline Dimensions



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

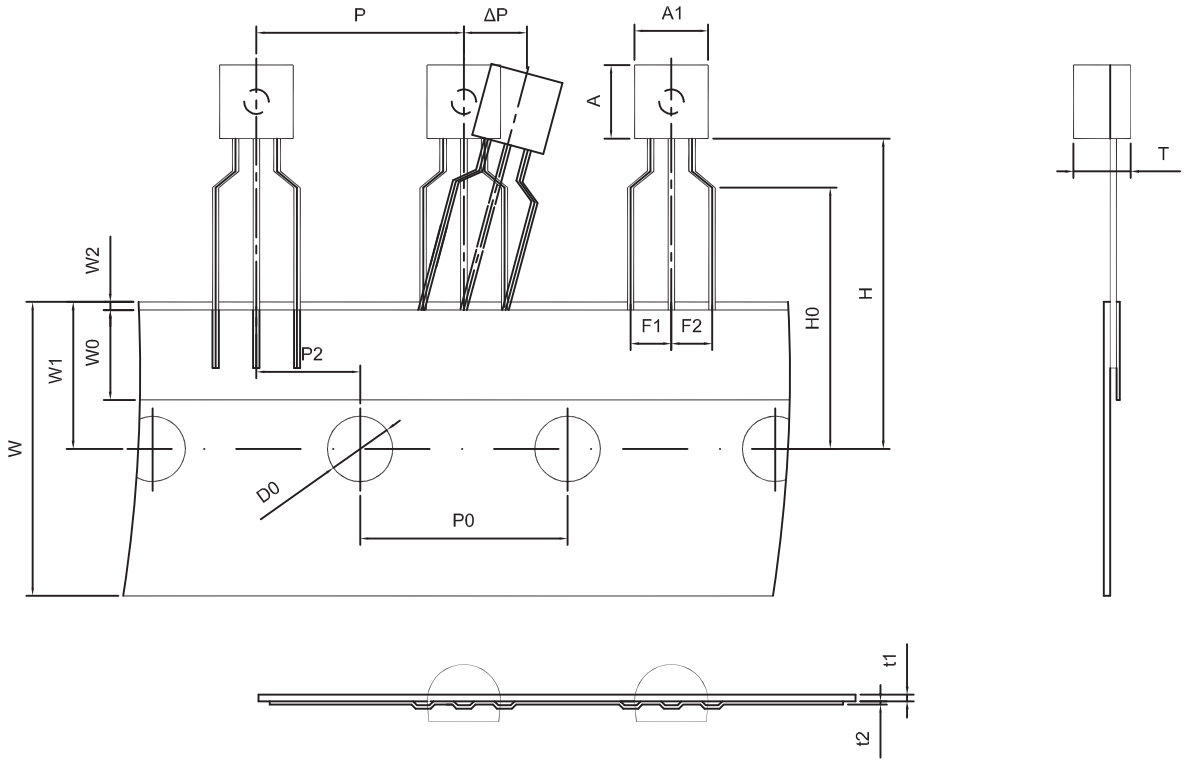
TO-92 Suggested Pad Layout



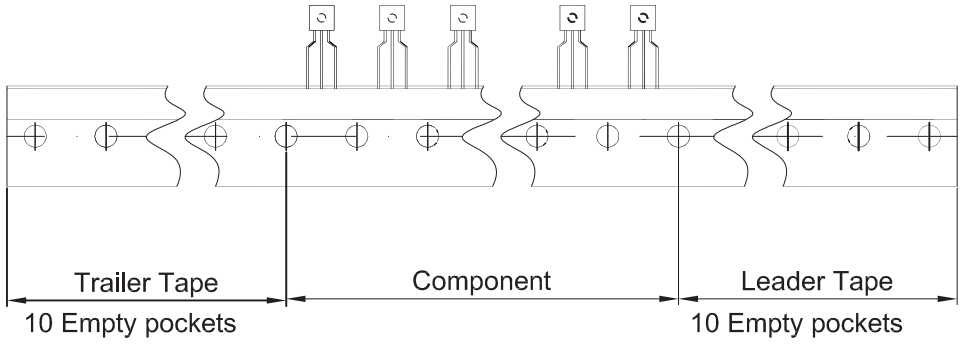
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

TO-92 Tape and Reel

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



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	---

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