HFZT

MPS2222

TO-92 Plastic-Encapsulate Transistors

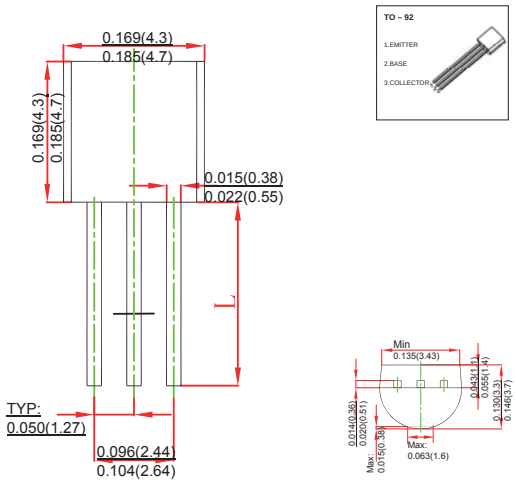
FEATURES

- General Purpose Switching and Amplification
- TRANSISTOR (NPN)

MECHANICAL DATA

- Case style:TO-92 molded plastic
- Mounting position:any

TO-92



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.6	A
P_C	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	℃

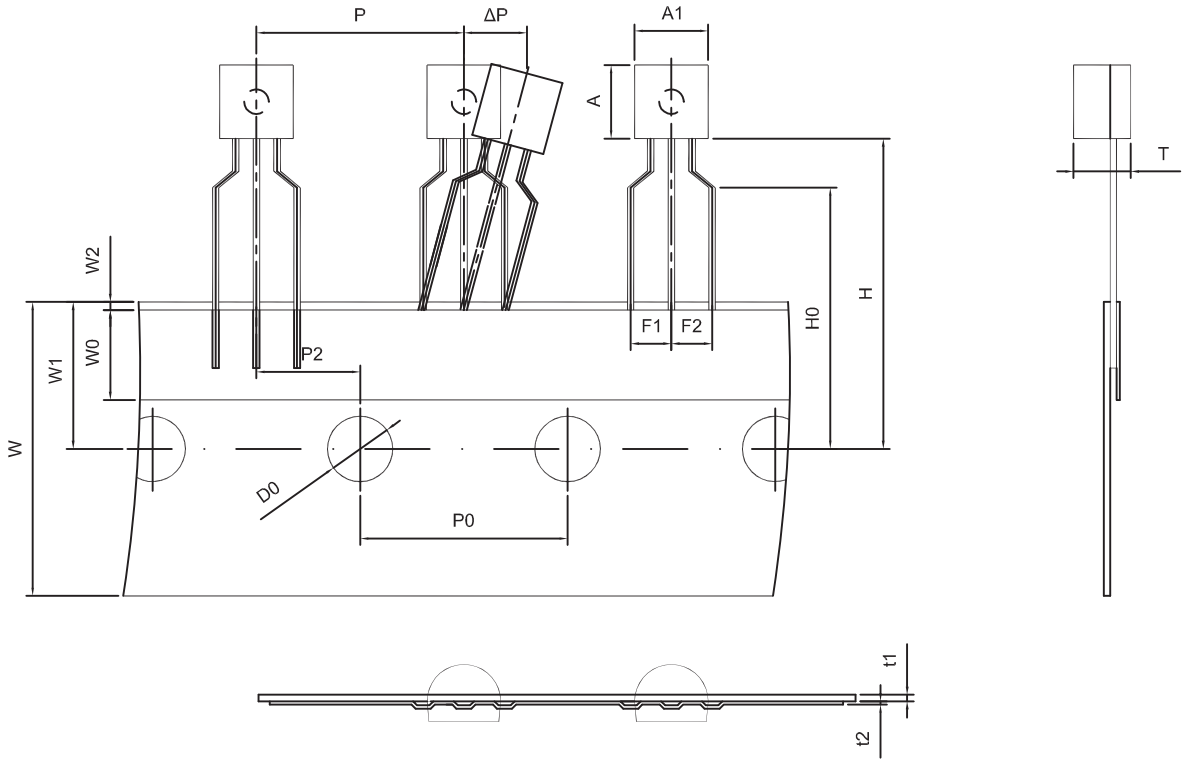
ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPS2222	TO-92	Bulk	1000pcs/Bag
MPS2222-TA	TO-92	Tape	2000pcs/Box

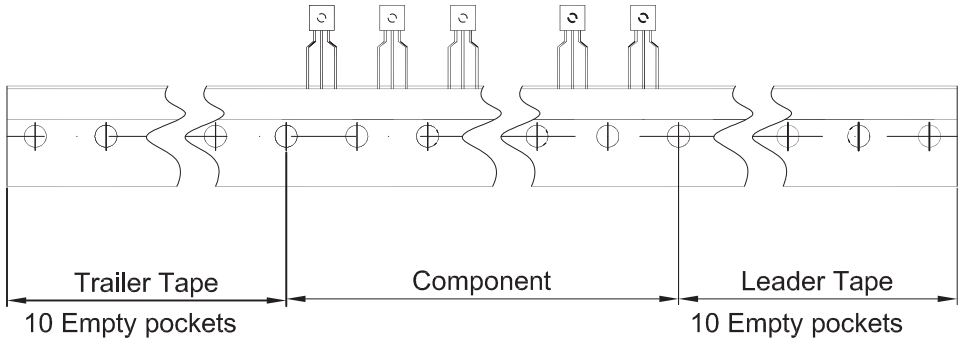
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.01mA,I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.01mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V,I_E=0			0.01	μA
Collector cut-off current	I_{CEX}	V_{CE}=60V,$V_{EB(off)}$=3V			0.01	μA
Emitter cut-off current	I_{EBO}	V_{EB}=3V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$*	V_{CE}=10V, I_C=150mA	100		300	
	$h_{FE(2)}$	V_{CE}=10V, I_C=0.1mA	35			
	$h_{FE(3)}$	V_{CE}=10V, I_C=500mA	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=500mA,I_B=50mA			1	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$*	I_C=500mA,I_B=50mA			2	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=100MHz			8	pF
Transition frequency	f_T	V_{CE}=20V,I_C= 20mA, f=100MHz	250			MHz
Delay time	t_d	V_{CC}=30V, $V_{BE(off)}$=-0.5V			10	nS
Rise time	t_r	I_C=150mA , I_{B1}= 15mA			25	nS
Storage time	t_s	V_{CC}=30V, I_C=150mA			225	nS
Fall time	t_f	I_{B1}=I_{B2}=15mA			60	nS

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

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