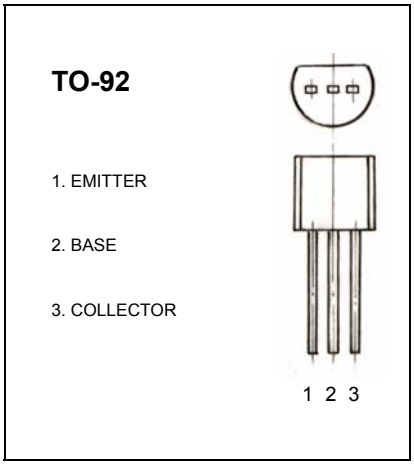
TRANSISTOR (PNP)

FEATURES

Complementary NPN Type available (MPS2222A)



MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.6	A
P_C	Collector Power Dissipation	0.625	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

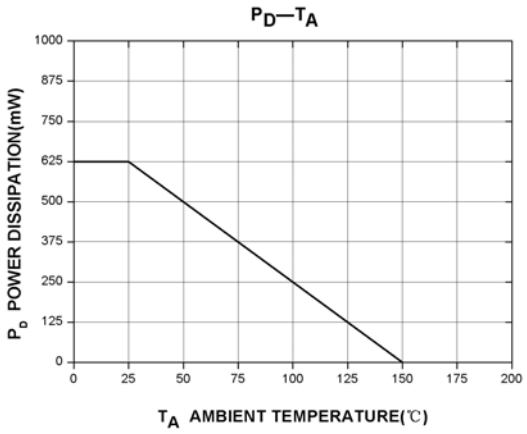
ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

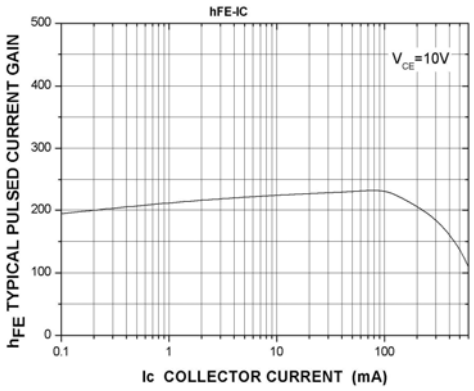
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA,I_E=0	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-10mA,I_B=0	-60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-50V,I_E=0			-10	n A
Collector cut-off current	I_{CEX}	V_{CE}=-30V,$V_{EB(off)}$=-0.5V			-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-3V,I_C=0			-10	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-10V,I_C=-0.1mA	78			
	$h_{FE(2)}$	V_{CE}=-10V,I_C=-150mA	100		300	
	$h_{FE(3)}$	V_{CE}=-10V,I_C=-500mA	52			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-150mA,I_B=-15mA			-0.4	V
	$V_{CE(sat)}$	I_C=-500mA,I_B=-50mA			-0.67	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-150mA,I_B=-15mA			-1	V
	$V_{BE(sat)}$	I_C=-500mA,I_B=-50mA			-1.2	V
Transition frequency	f_T	V_{CE}=-20V,I_C=-50mA,f=100MHz	200			MHz
Delay time	t_d	V_{CC}=-30V,Ic=-150mA,I_{B1}=-15mA			10	nS
Rise time	t_r				25	nS
Storage time	t_S	V_{CC}=-6V,Ic=-150mA,			225	nS
Fall time	t_f	I_{B1}=I_{B2}=-15mA			60	nS

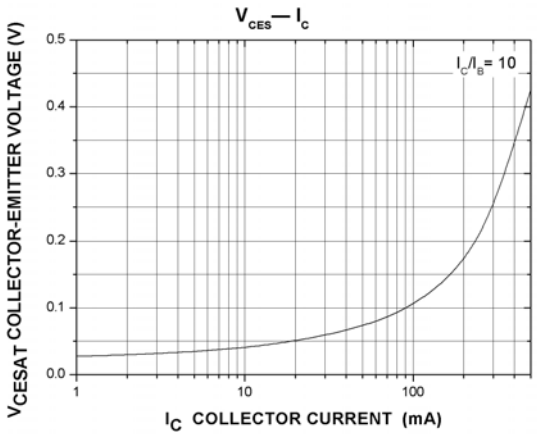
CLASSIFICATION OF $h_{FE(2)}$

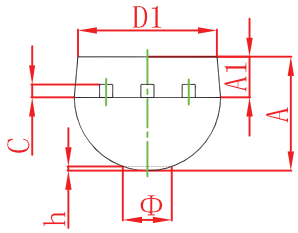
Rank	L	H
Range	100-200	200-300

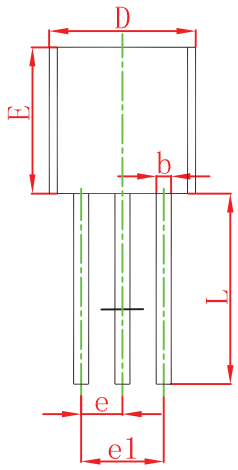
Typical Characteristics





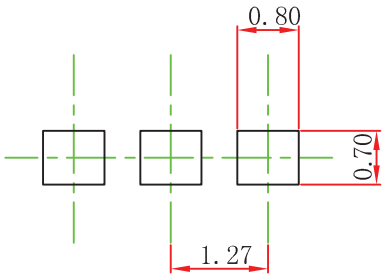






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.:$$	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	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.