

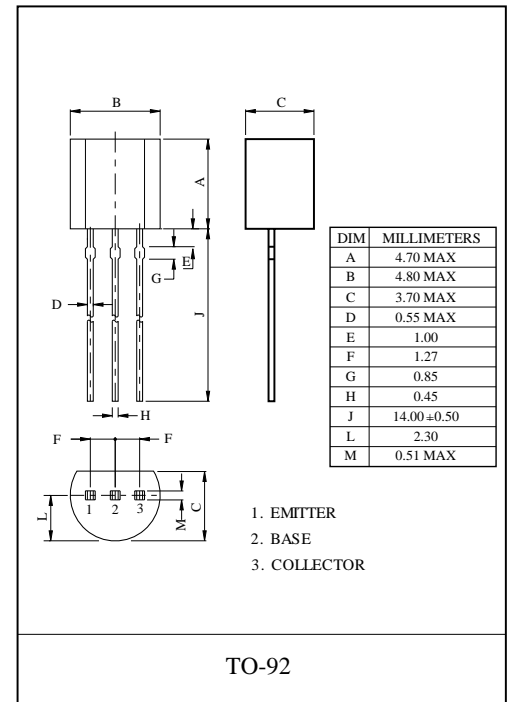
MPSA42 TRANSISTOR (NPN)

FEATURES

High voltage

MAXIMUM RATINGS (T_a=25 °C unless otherwise noted)

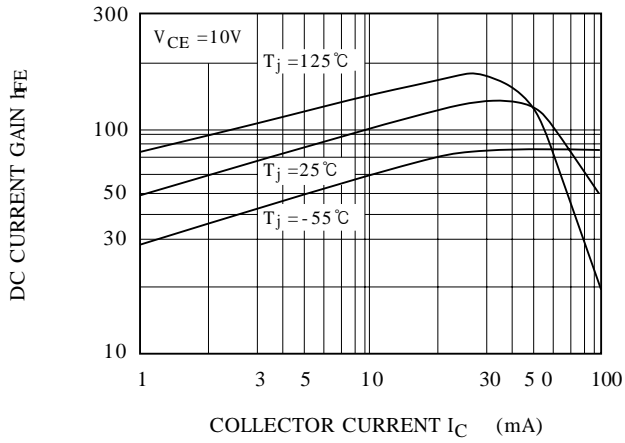
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	300	V
V _{CEO}	Collector-Emitter Voltage	300	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	500	mA
P _C	Collector Power Dissipation	625	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-50~150	°C
R _{θJA}	Thermal Resistance, junction to Ambient	200	°C/W
R _{θJC}	Thermal Resistance, unction to Case	83.3	°C/W



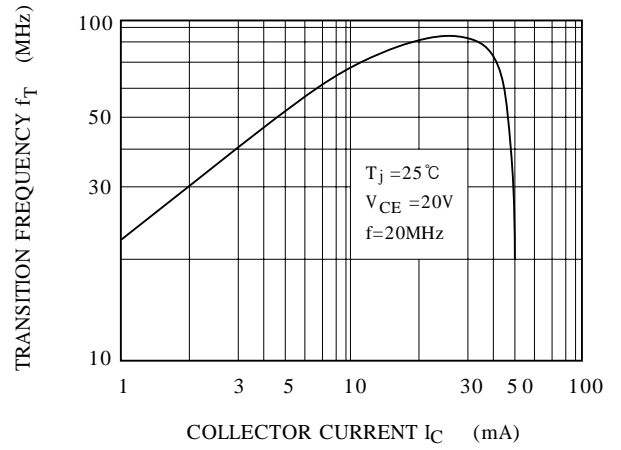
ELECTRICAL CHARACTERISTICS (T_a=25 °C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	300			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	300			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CB0}	V _{CB} =200V, I _E =0			0.25	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =10V, I _C =1mA	60			
	h _{FE(2)}	V _{CE} =10V, I _C =10mA	80		250	
	h _{FE(3)}	V _{CE} =10V, I _C =30mA	75			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =20mA, I _B =2mA			0.2	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =20mA, I _B =2mA			0.9	V
Transition frequency	f _T	V _{CE} =20V, I _C =10mA, f=30MHz	50			MHz

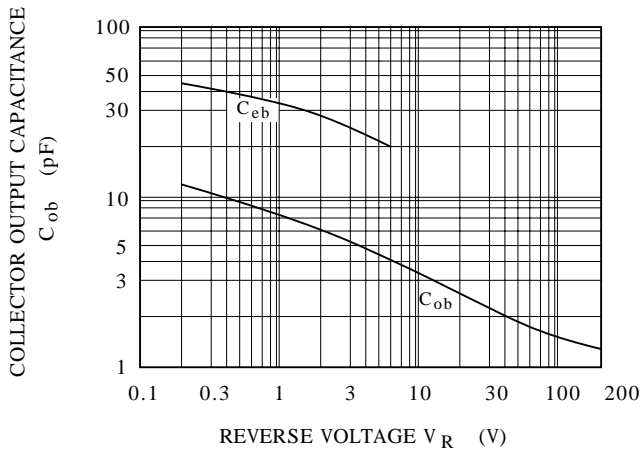
hFE - I_C



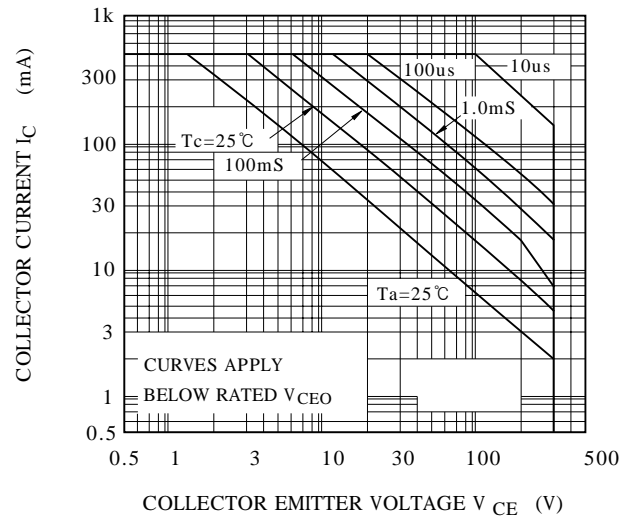
f_T - I_C



C_{ob} - V_R



I_C - V_{CE}



V_{be(sat)}, V_{ce(sat)} - I_C

