



SHEN ZHEN LONG JING MICRO- ELECTRONICS CO., LTD

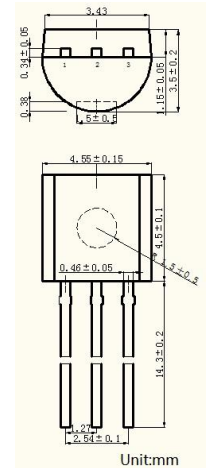
TO-92 Plastic-Encapsulate Transistors

KSP10-061

TRANSISTOR (NPN)

MAXIMUM RATINGS(TA=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	30	V
V _{CEO}	Collector-Emitter Voltage	25	V
V _{EBO}	Emitter-Base Voltage	3	V
I _C	Collector Current-Continuous	50	mA
P _C	Collector Power Dissipation	0.35	W
T _J	Junction Temperature	150	℃
T _{stg}	Storage Temperature	-55-150	℃



1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS(Ta=25℃ unless otherwise specified):

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100uA, I _E =0	30			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	25			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _C =10uA, I _C =0	3			V
Collector cut-off current	I _{CBO}	V _{CB} =25V, I _E =0			0.1	uA
Emitter cut-off current	I _{EBO}	V _{EB} =2V, I _C =0			0.1	uA
DC current gain	HFE ₍₁₎	V _{CE} =5V, I _C =1mA	60			
	HFE ₍₂₎	V _{CE} =10V, I _C =4mA	60		200	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =4mA, I _B =0.4mA			0.5	V
Base-emitter on voltage	V _{BE(on)}	V _{CE} =10V, I _C =4mA			0.95	V
Collector capacitance	C _{ob}	V _{CB} =10V, f=1MHz			0.7	pF
Gain Bandwidth Product	f _T	V _{CE} =10V, I _C =4mA, f=100MHz	650			MHz

Typical Characteristics

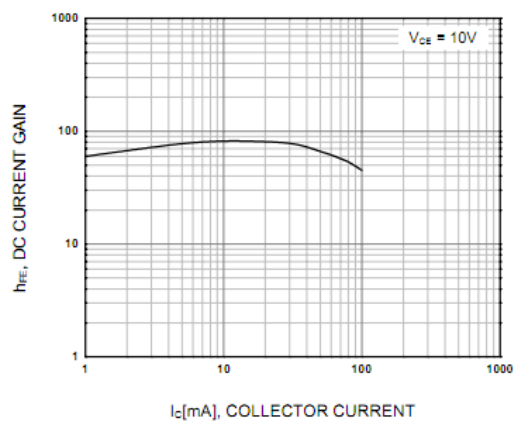


Figure 1. DC current Gain

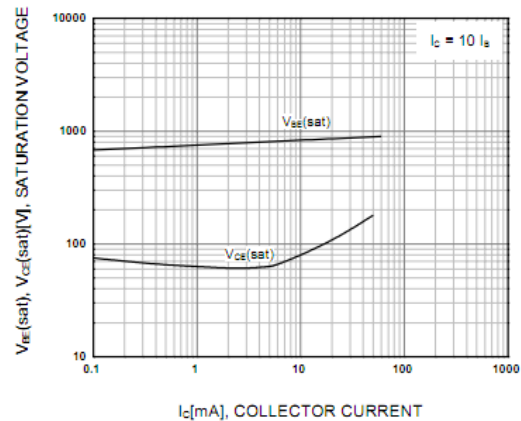


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

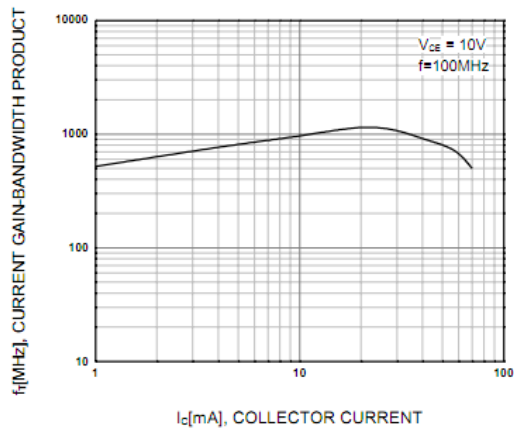


Figure 3. Current Gain Bandwidth Product

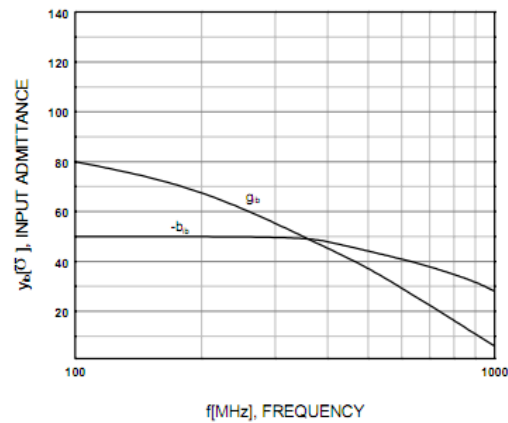


Figure 4. Rectangular Form

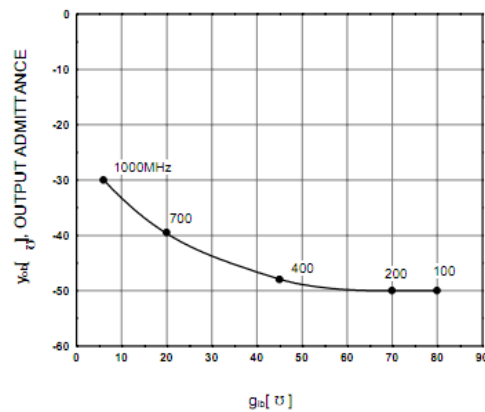


Figure 5. Polar Form

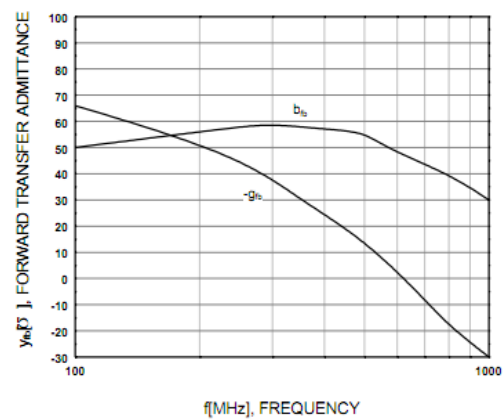


Figure 6. Rectangular Form

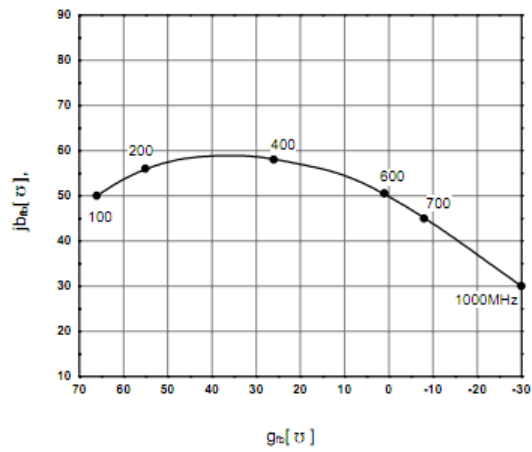


Figure 7. Polar Form

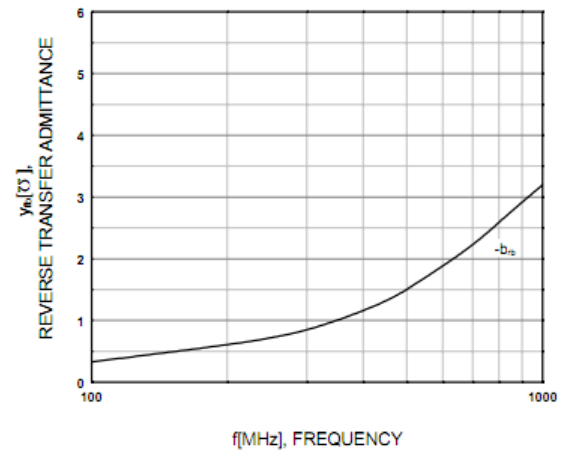


Figure 8. Rectangular Form

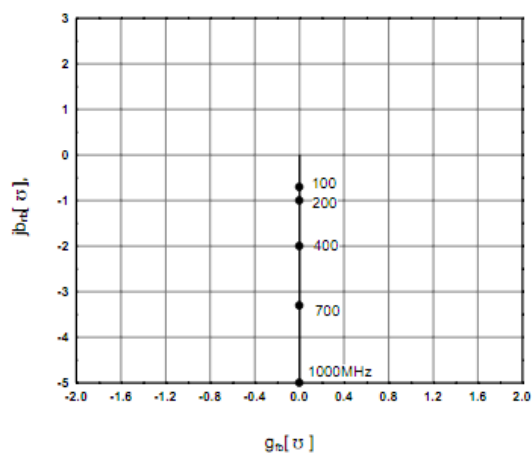


Figure 9. Polar Form

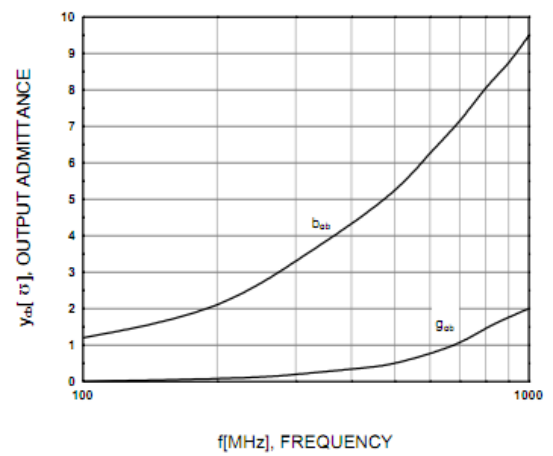


Figure 10. Rectangular Form

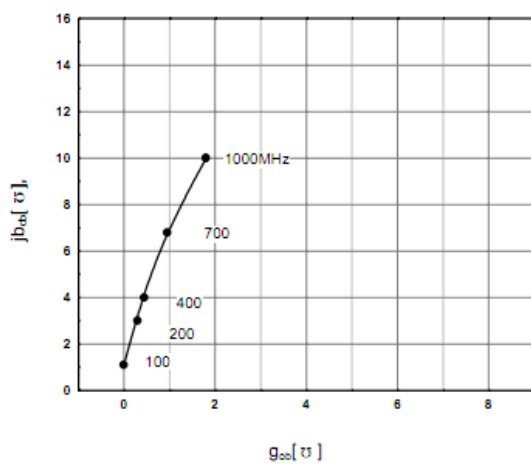


Figure 11. Polar Form