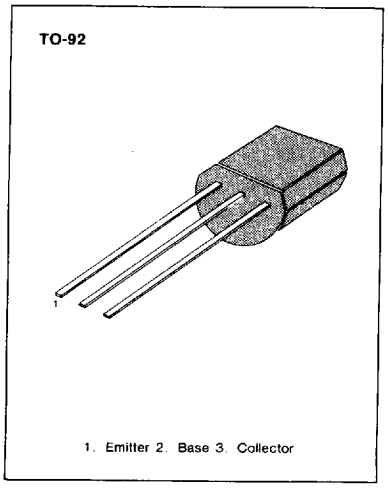
HIGH VOLTAGE TRANSISTOR

- **Collector-Emitter Voltage:** V_{CEO} = KSP42: 300V
  KSP43: 200V
- **Collector Dissipation:** P_C (max)=625mW



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a =25°C)

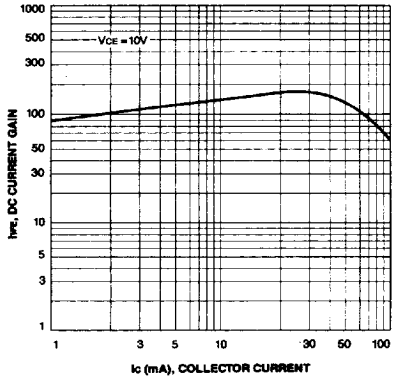
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}		
KSP42		300	V
KSP43		200	V
Collector-Emitter Voltage	V_{CEO}		
KSP42		300	V
KSP43		200	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	500	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	−55∼150	°C

ELECTRICAL CHARACTERISTICS (T_a =25°C)

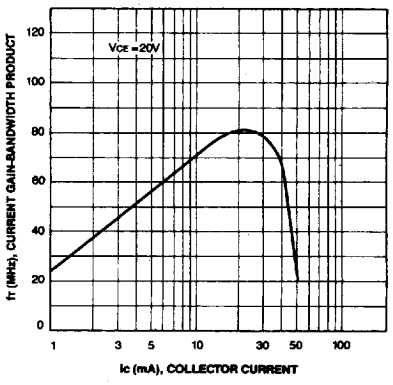
Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	I_C = 100μA, I_B = 0			
KSP42			300		V
KSP43			200		V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = 1mA, I_B = 0			
KSP42			300		V
KSP43			200		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E = 100μA, I_C = 0	6		V
Collector Cut-off Current	I_{CBO}				
KSP42		V_{CB} = 200V, I_E = 0		100	nA
KSP43		V_{CB} = 160V, I_E = 0		100	nA
Emitter Cut-off Current	I_{EBO}				
KSP42		V_{BE} = 6V, I_C = 0		100	nA
KSP43		V_{BE} = 4V, I_C = 0		100	nA
*DC Current Gain	h_{FE}	V_{CE} = 10V, I_C = 1mA	25		
		V_{CE} = 10V, I_C = 10mA	40		
		V_{CE} = 10V, I_C = 30mA	40		
*Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C = 20mA, I_B = 2mA		0.5	V
*Base-Emitter Saturation Voltage	V_{BE}(sat)	I_C = 20mA, I_B = 2mA		0.9	V
Collector-Base Capacitance	C_{cb}	V_{CB} = 20V, I_E = 0			
KSP42		f = 1MHz		3	pF
KSP43				4	pF
Current Gain Bandwidth Product	f_T	V_{CE} = 20V, I_C = 10mA	50		MHz
		f = 100MHz			

* Pulse Test : PW≤300μs, Duty Cycle ≤2%

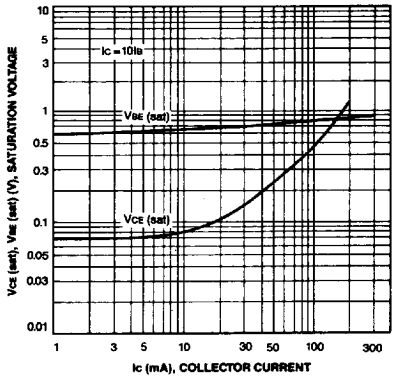
DC CURRENT GAIN



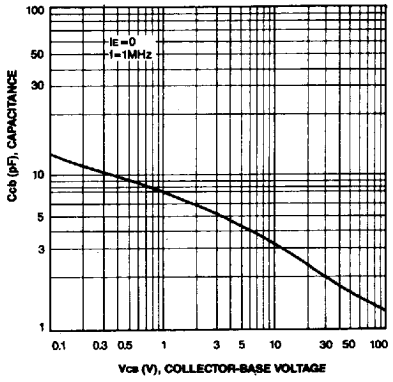
CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR-EMITTER SATURATION VOLTAGE
BASE-EMITTER SATURATION VOLTAGE



COLLECTOR-BASE CAPACITANCE



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