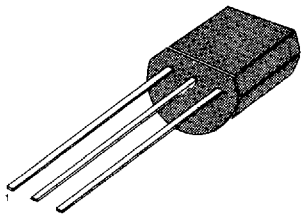
HIGH VOLTAGE TRANSISTOR

- **Collector-Emitter Voltage:** V_{CEO} = KSP44: 400V
  KSP45: 350V
- **Collector Dissipation:** Pc(max) = 625mW

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

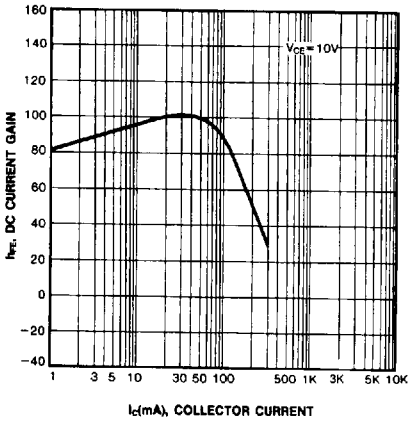
Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}		
KSP44		500	V
KSP45		400	V
Collector-Emitter Voltage	V_{CEO}		
KSP44		400	V
KSP45		350	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	300	mA
Collector Dissipation (T_A=25°C)	P_C	625	mW
Collector Dissipation (T_C=25°C)	P_C	1.5	W
Junction Temperature	T_j	150	°C
Storage Temeprature	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			
KSP44			500		V
KSP45			400		V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = 1mA, I_B = 0			
KSP44			400		V
KSP45			350		V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E = 100μA, I_C = 0	6		V
Collector Cut-off Current	I_{CBO}				
KSP44		V_{CB} = 400V, I_E = 0		0.1	μA
KSP45		V_{CB} = 320V, I_E = 0		0.1	μA
Collector Cut-off Current	I_{CES}				
KSP44		V_{CE} = 400V, I_B = 0		0.5	μA
KSP45		V_{CE} = 320V, I_B = 0		0.5	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 4V, I_C = 0		0.1	μA
*DC Current Gain	h_{FE}	V_{CE} = 10V, I_C = 1mA	40		
		V_{CE} = 10V, I_C = 10mA	50	200	
		V_{CE} = 10V, I_C = 50mA	45		
		V_{CE} = 10V, I_C = 100mA	40		
*Collector-Emitter Saturation Voltage	V_{CE}(sat)	I_C = 1mA, I_B = 0.1mA		0.4	V
		I_C = 10mA, I_B = 1mA		0.5	V
		I_C = 50mA, I_B = 5mA		0.75	V
*Base-Emitter Saturation Voltage	V_{BE}(sat)	I_C = 10mA, I_B = 1mA		0.75	V
Output Capacitance	Cob	V_{CB} = 20V, I_E = 0 f = 1MHz		7	pF

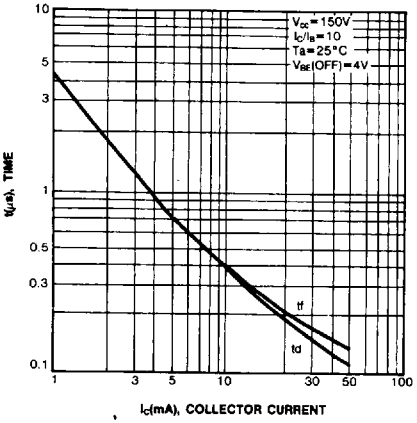
* Pulse Test : PW≤300μs, Duty Cycle ≤2%

DC CURRENT GAIN



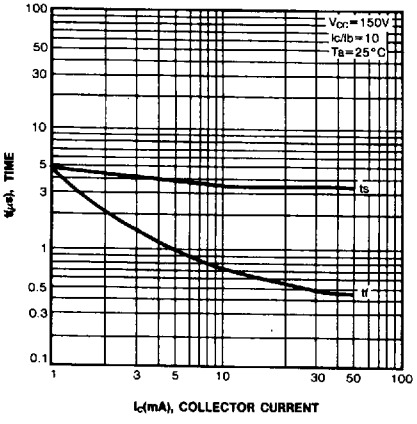
I_C(mA), COLLECTOR CURRENT

TURN-ON SWITCHING TIMES



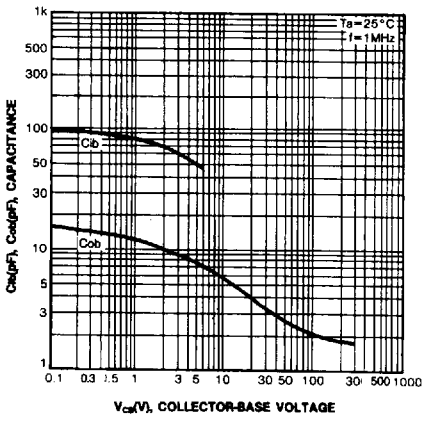
I_C(mA), COLLECTOR CURRENT

TURN-OFF SWITCHING TIMES



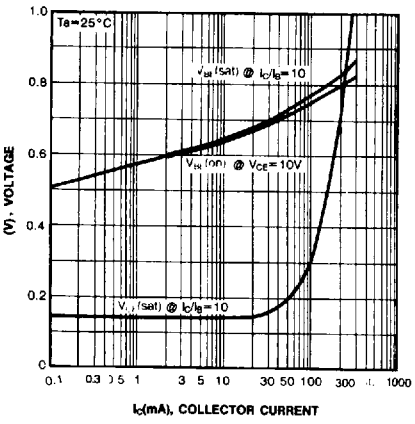
I_C(mA), COLLECTOR CURRENT

CAPACITANCE



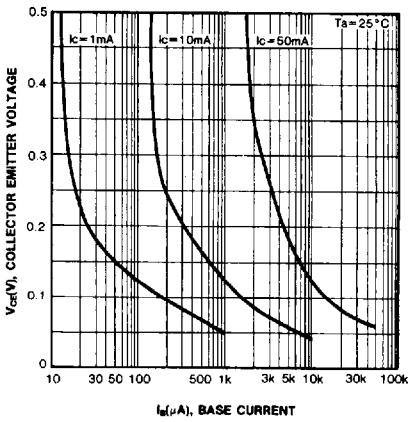
V_{CB}(V), COLLECTOR-BASE VOLTAGE

ON VOLTAGE



I_C(mA), COLLECTOR CURRENT

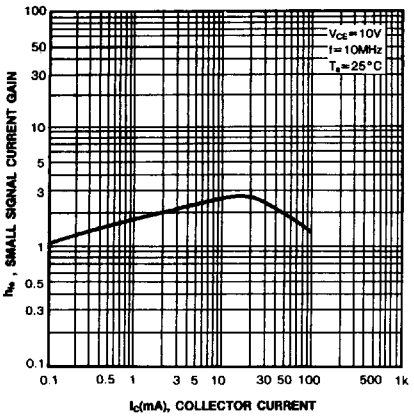
COLLECTOR SATURATION REGION



I_B(μA), BASE CURRENT

3

HIGH FREQUENCY CURRENT GAIN



SAFE OPERATING AREA