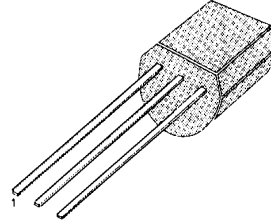


AMPLIFIER TRANSISTOR

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	30	V
Collector-Emitter Voltage	V_{CE0}	25	V
Emitter-Base Voltage	V_{EB0}	3.0	V
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	350	mW
Derate above 25°C		2.8	mW/ $^\circ\text{C}$
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	1.0	W
Derate above 25°C		8.0	W/ $^\circ\text{C}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~150	$^\circ\text{C}$
Thermal Resistance, Junction to Case	$R_{th(j-c)}$	125	$^\circ\text{C/W}$
Thermal Resistance, Junction to Ambient	$R_{th(j-a)}$	357	$^\circ\text{C/W}$

TO-92



1. Emitter 2. Base 3. Collector

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

Characteristic	Symbol	Test Conditions	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C=100\mu\text{A}$, $I_E=0$	30		V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C=1\text{mA}$, $I_B=0$	25		V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E=10\mu\text{A}$, $I_C=0$	3.0		V
Collector Cut-off Current	I_{CB0}	$V_{CB}=25\text{V}$, $I_E=0$		100	nA
Emitter Cut-off Current	I_{EB0}	$V_{EB}=2\text{V}$, $I_C=0$		100	nA
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}$, $I_C=4\text{mA}$	60		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=4\text{mA}$, $I_B=0.4\text{mA}$		0.5	V
Base-Emitter On Voltage	$V_{BE(sat)}$	$V_{CE}=10\text{V}$, $I_C=4\text{mA}$		0.95	V
Current Gain Bandwidth Product	C_{CB}	$V_{CE}=10\text{V}$, $I_C=4\text{mA}$	650		MHz
Collector Base Capacitance	C_{RB}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		0.7	pF
Collector Base Feedback Capacitance	C_{c-rbb}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$			
:KSP10			0.35	0.65	pF
:KSP11			0.6	0.9	pF
Collector Base Time Constant		$V_{CB}=10\text{V}$, $I_C=4\text{mA}$, $f=31.8\text{MHz}$		9.0	ps

*Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$

COMMON-BASE y PARAMETERS vs FREQUENCY
($V_{CB}=10V$, $I_C=4mA$, $T_A=25^\circ C$)

