

KSC2331

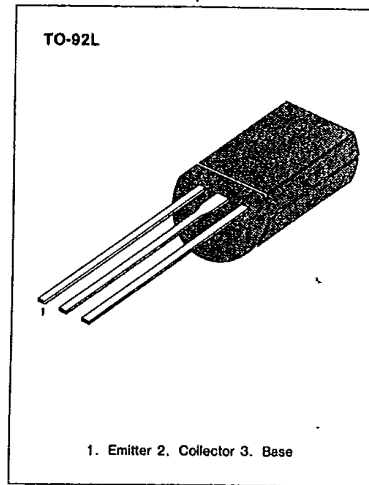
NPN EPITAXIAL SILICON TRANSISTOR

**LOW FREQUENCY AMPLIFIER
MEDIUM SPEED SWITCHING**

- Complement to KSA931
- High Collector-Base Voltage $V_{CBO}=80V$
- Collector Current $I_C=700mA$
- Collector Dissipation $P_C=1W$

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ C$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	8	V
Collector Current	I_C	700	mA
Collector Dissipation	P_C	1	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ C$



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	80			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=10mA, I_B=0$	60			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=-10\mu A, I_C=0$	8			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=60V, I_E=0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=2V, I_C=50mA$	40		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500mA, I_B=50mA$		0.2	0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500mA, I_B=50mA$		0.86	1.20	V
Current-Gain-Bandwidth Product	f_T	$V_{CE}=10V, I_C=50mA$	30	50		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0$ $f=1MHz$		8		pF

h_{FE} CLASSIFICATION

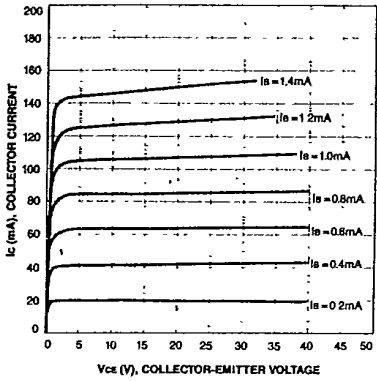
Classification	O	Y
h_{FE}	70-140	120-240

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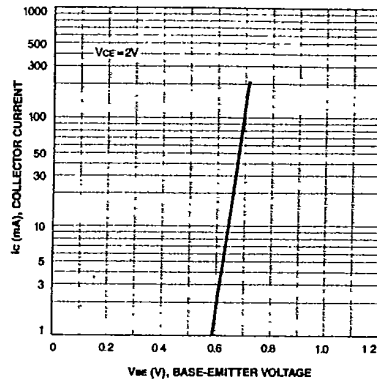
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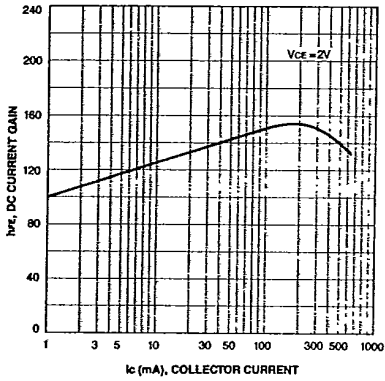
STATIC CHARACTERISTIC



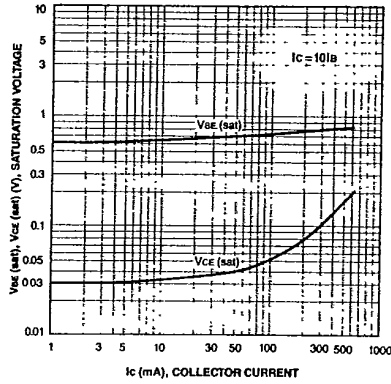
BASE-EMITTER ON VOLTAGE



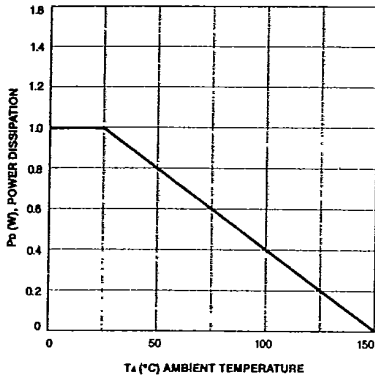
DC CURRENT GAIN



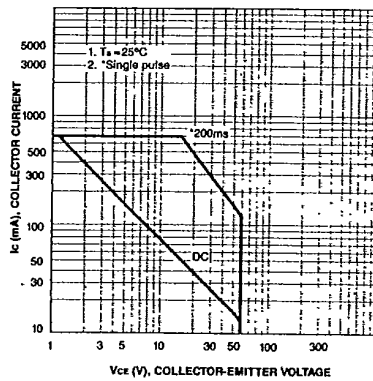
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



POWER DERATING



SAFE OPERATING AREA



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