

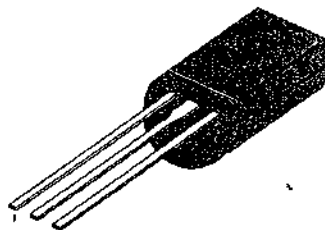
KSC2331**NPN EPITAXIAL SILICON TRANSISTOR****LOW FREQUENCY AMPLIFIER
MEDIUM SPEED SWITCHING**

- Complement to KSA931
- High Collector-Base Voltage $V_{CB0} = 80V$
- 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_{CB0}	80	V
Collector-Emitter Voltage	V_{CE0}	60	V
Emitter-Base Voltage	V_{EB0}	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	$^\circ C$

TO-92L



1. Emitter 2. Collector 3. Base

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = 100\mu A, I_E = 0$	80			V
Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = 10mA, I_E = 0$	60			V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = -10\mu A, I_C = 0$	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	$V_{CE(sat)}$	$I_C = 500mA, I_E = 50mA$		0.2	0.7	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 500mA, I_E = 50mA$		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

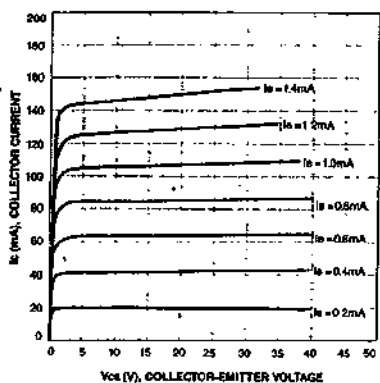
Classification	O	Y
h_{FE}	70-140	120-240

KSC2331

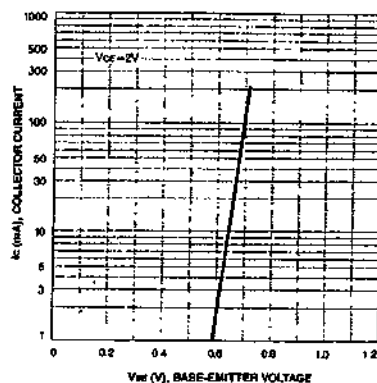
NPN EPITAXIAL SILICON TRANSISTOR

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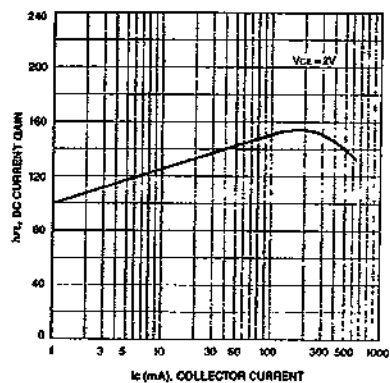
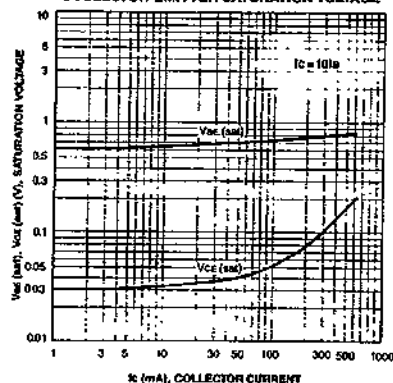
STATIC CHARACTERISTIC



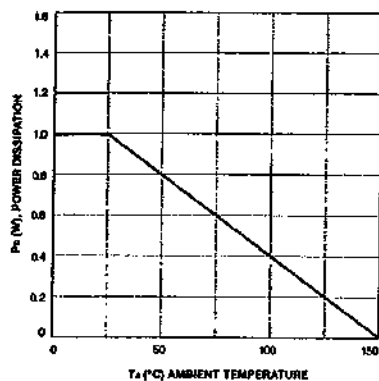
BASE-EMITTER ON VOLTAGE



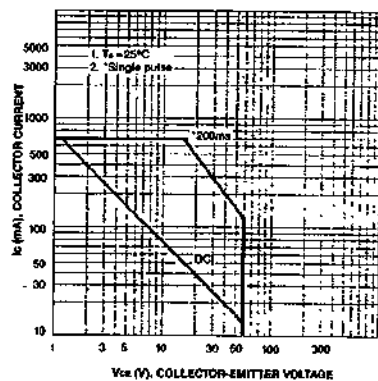
DC CURRENT GAIN

BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE

POWER DERATING



SAFE OPERATING AREA



3

