

KSC1623**NPN EPITAXIAL SILICON TRANSISTOR**

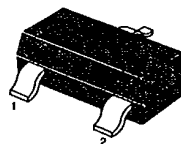
LOW FREQUENCY AMPLIFIER
HIGH FREQUENCY OSC

• Complement to KSA812

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	50	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	100	mA
Collector Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$

SOT-23



1. Base 2. Emitter 3. Collector

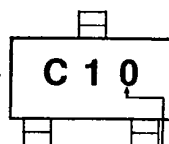
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$			0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=6\text{V}, I_C=1\text{mA}$	90	200	600	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.15	0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		0.86	1.0	V
Base-Emitter On Voltage	$V_{BE(on)}$	$I_C=1\text{mA}, V_{CE}=6\text{V}$	0.55	0.62	0.65	V
Current Gain-Bandwidth Product	f_T	$I_E=-10\text{mA}, V_{CE}=6\text{V}$		250		MHz
Output Capacitance	C_{ob}	$V_{CB}=6\text{V}, I_E=0$ $f=1\text{MHz}$		3		pF

 h_{FE} CLASSIFICATION

Classification	O	Y	G	L
h_{FE}	90-180	135-270	200-400	300-600

Marking

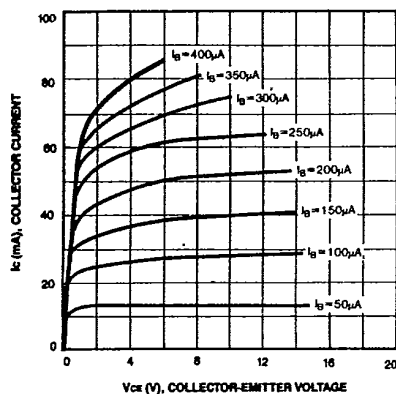
 h_{FE} grade

KSC1623

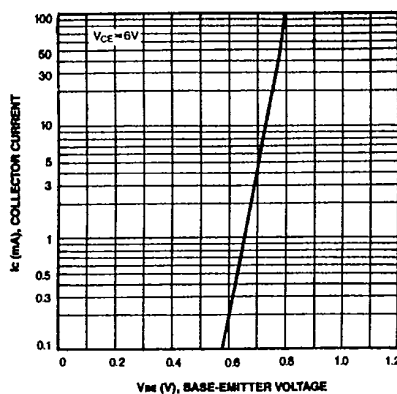
NPN EPITAXIAL SILICON TRANSISTOR

T-31-15

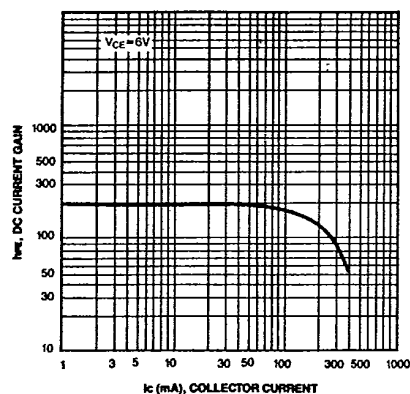
STATIC CHARACTERISTIC



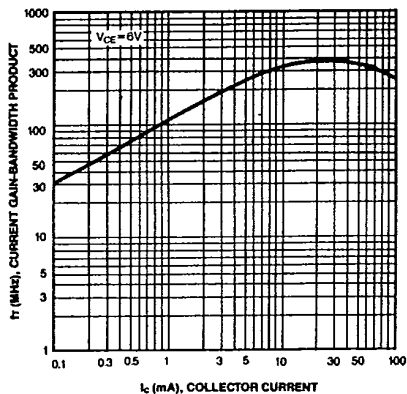
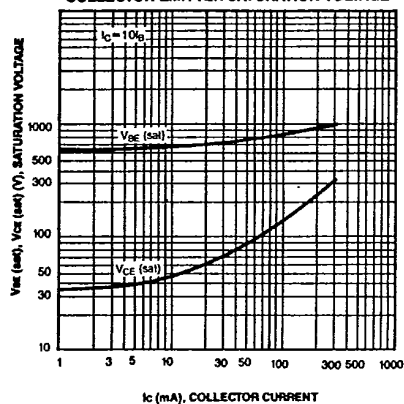
TRANSFER CHARACTERISTIC



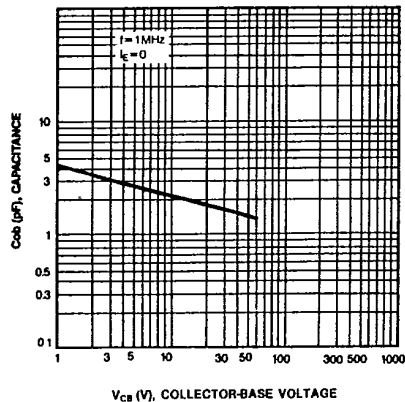
DC CURRENT GAIN



CURRENT GAIN-BANDWIDTH PRODUCT

BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE

OUTPUT CAPACITANCE



3

