

# KSC1815

# NPN EPITAXIAL SILICON TRANSISTOR

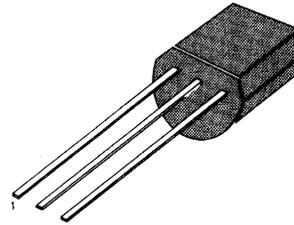
## AUDIO FREQUENCY AMPLIFIER HIGH FREQUENCY OSC

- Complement to KSC1815
- Collector-Base Voltage  $V_{CBO} = -50V$

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	150	mA
Base Current	$I_B$	50	mA
Collector Dissipation	$P_C$	400	mW
Junction Temperature	$T_J$	125	$^\circ C$
Storage Temperature	$T_{STG}$	-55 ~ 150	$^\circ C$

TO-92



1. Emitter 2. Base 3. Collector

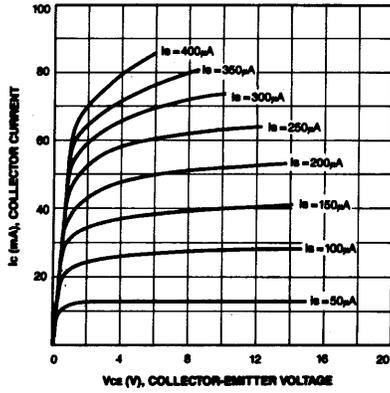
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ C$ )

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 60V, I_E = 0$			0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			0.1	$\mu A$
DC Current Gain	$h_{FE1}$	$V_{CE} = 6V, I_C = 2mA$	70		700	
	$h_{FE2}$	$V_{CE} = 6V, I_C = 150mA$	25			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 10mA$		0.1	0.25	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 100mA, I_B = 10mA$			1.0	V
Current Gain-Bandwidth Product	$f_T$	$V_{CE} = 10V, I_C = 1mA$	80			MHz
Output Capacitance	$C_{OB}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$		2.0	3.0	pF
Noise Figure	NF	$V_{CE} = 6V, I_C = 0.1mA$ $R_G = 10K\Omega, f = 1Hz$		1.0	1.0	dB

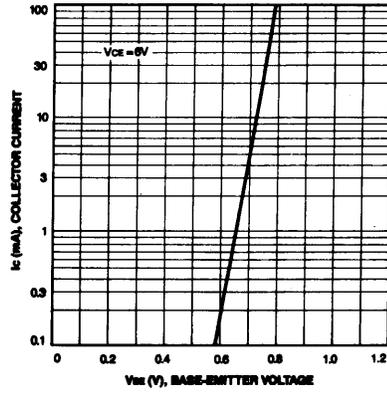
### $h_{FE1}$ CLASSIFICATION

Classification	O	Y	G	L
$h_{FE1}$	70~140	120~240	200~400	350~700

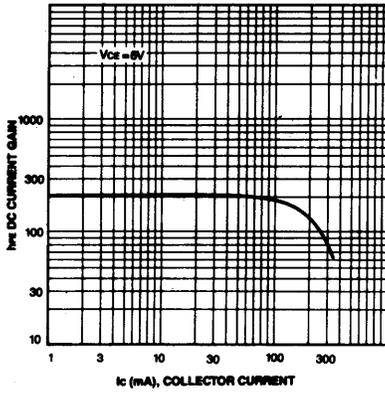
STATIC CHARACTERISTIC



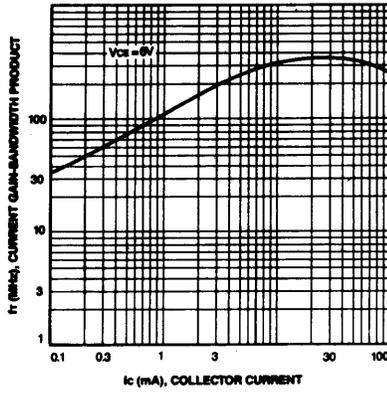
TRANSFER CHARACTERISTIC



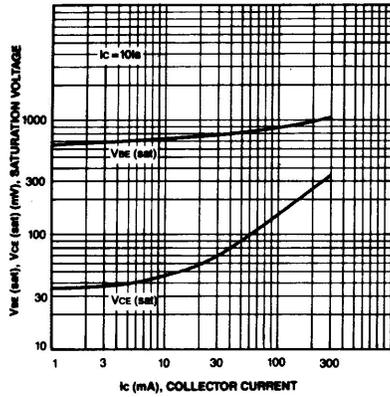
DC CURRENT GAIN



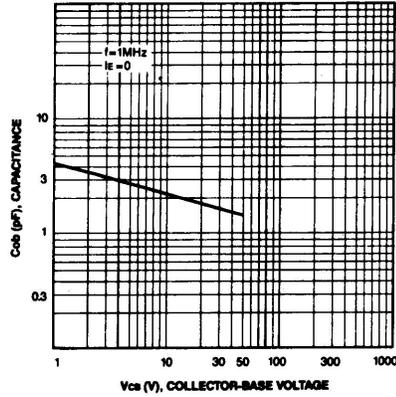
CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



OUTPUT CAPACITANCE



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