

KSC1675**NPN EPITAXIAL SILICON TRANSISTOR**

T-31-17

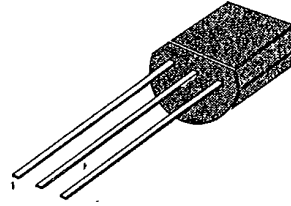
FM/AM RF AMP, MIX, CONV, OSC, IF

- Collector-Base Voltage $V_{CBO} = 30V$
- High Current Gain Bandwidth Product $f_T = 300MHz$ (Typ)
- Low Collector Capacitance $C_{ob} = 2.0PF$ (Typ)

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	250	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{stg}	-55 - 150	$^\circ C$

TO-92



1. Emitter 2. Base 3. Collector

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

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 10\mu A, I_E = 0$	50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 5mA, I_B = 0$	30			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 10\mu A, I_C = 0$	5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 50V, I_E = 0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = 6V, I_C = 1mA$	40		240	
Base-Emitter On Voltage	$V_{BE(ON)}$	$V_{CE} = 6V, I_C = 1mA$		0.67	0.75	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$		0.08	0.3	V
Current Gain-Bandwidth Product	f_T	$V_{CE} = 6V, I_C = 1mA$	150	300		MHz
Output Capacitance	C_{ob}	$f = 1MHz, V_{CB} = 6V$		2.0	2.5	PF

 h_{FE} CLASSIFICATION

Classification	R	O	Y
h_{FE}	40-80	70-140	120-240

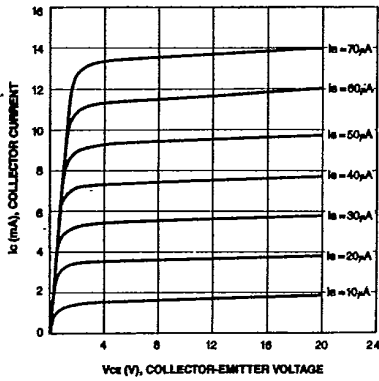


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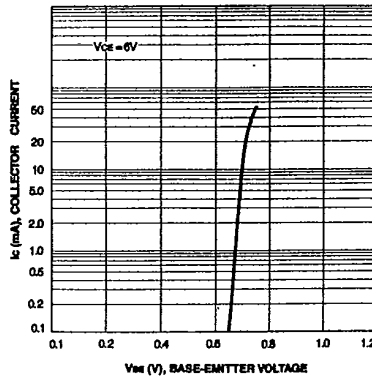
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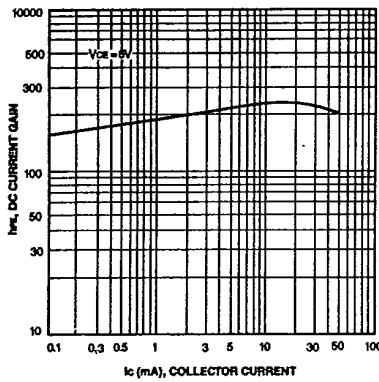
STATIC CHARACTERISTIC



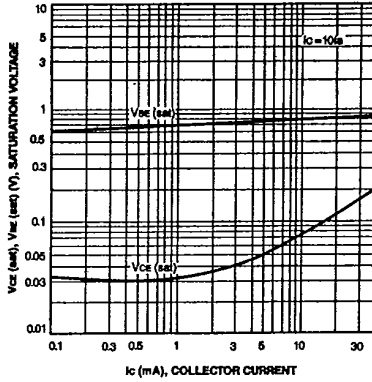
BASE-EMITTER ON VOLTAGE



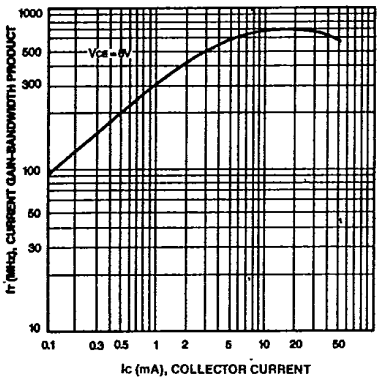
DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



CURRENT GAIN-BANDWIDTH PRODUCT



COLLECTOR INPUT CAPACITANCE
COLLECTOR OUTPUT CAPACITANCE

