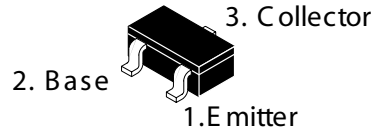


RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

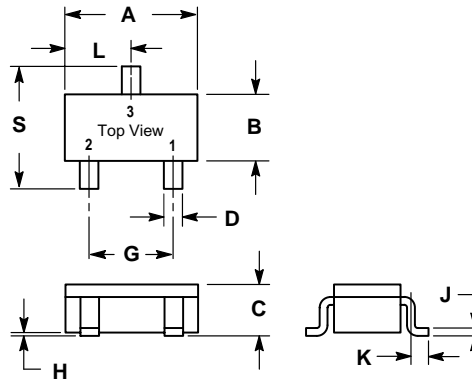
## ● FEATURES

- Low  $V_{CE(sat)}$   
 $V_{CE(sat)} \leq 0.5V$   
( $I_C / I_B = - 0.5A / - 50mA$ )
- $I_C = - 0.8A$ .
- Complements the 2SD1781K.
- Epitaxial planar type
- PNP silicon transistor



## ● MECHANICAL DATA

- Case: SC-59, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.008 grams (approx.)
- Mounting Position: Any



SC-59		
Dim	Min	Max
A	2.70	3.10
B	1.30	1.70
C	1.00	1.30
D	0.35	0.50
G	1.70	2.30
H	0.00	0.10
J	0.10	0.26
K	0.20	0.60
L	1.25	1.65
S	2.25	3.00
All Dimension in mm		

## ● ABSOLUTE MAXIMUM RATINGS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	LIMITS	UNIT
Collector-Base Voltage	$V_{CBO}$	- 40	V
Collector-Emitter Voltage	$V_{CEO}$	- 32	V
Emitter-Base Voltage	$V_{EBO}$	- 5	V
Collector Current	$I_C$	- 0.8	A
Collector Power Dissipation	$P_C$	0.2	W
Operating Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 ~ +150	°C

## ● ELECTRICAL CHARACTERISTICS (Ta = 25°C)

TYPE NUMBER	SYMBOL	Min.	Typ.	Max.	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	$BV_{CBO}$	- 40	-	-	V	$I_C = -50\mu A$
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	- 32	-	-	V	$I_C = -1mA$
Emitter-Base Breakdown Voltage	$BV_{EBO}$	- 5	-	-	V	$I_E = -50\mu A$
Collector Cutoff Current	$I_{CBO}$	-	-	- 0.5	$\mu A$	$V_{CB} = -20V$
Emitter Cutoff Current	$I_{EBO}$	-	-	- 0.5	$\mu A$	$V_{EB} = -4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	- 0.5	V	$I_C / I_B = -0.5A / -50mA$
DC Current Transfer Ratio	$h_{FE}$	120	-	390	-	$V_{CE} = -3V, I_C = -100mA$
Transition Frequency	$f_T$	50	200	-	MHz	$V_{CE} = -5V, I_E = 50mA,$ $f = 100MHz$
Output Capacitance	$C_{ob}$	-	12	30	pF	$V_{CB} = -10V, I_E = 0A,$ $f = 1MHz$

## ● $h_{FE}$ VALUES ARE CLASSIFIED AS FOLLOWS:

ITEM	Q	R
$h_{FE}$	120 ~ 270	180 ~ 390
Marking	AHQ	AHR

## ● ELECTRICAL CHARACTERISTIC CURVES

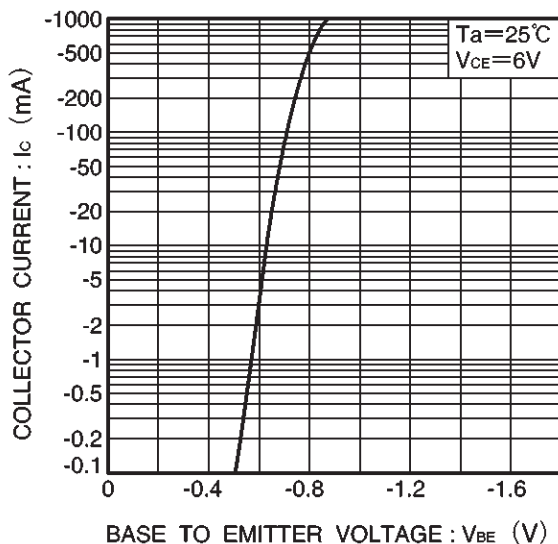


Fig.1 Grounded emitter propagation characteristics

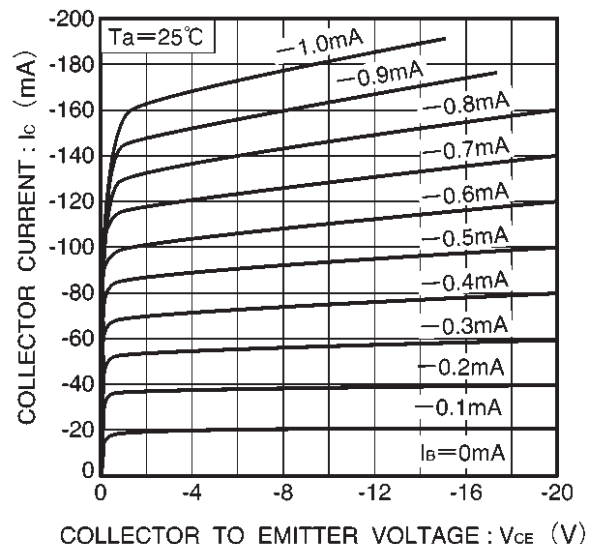


Fig.2 Grounded emitter output characteristics ( I )

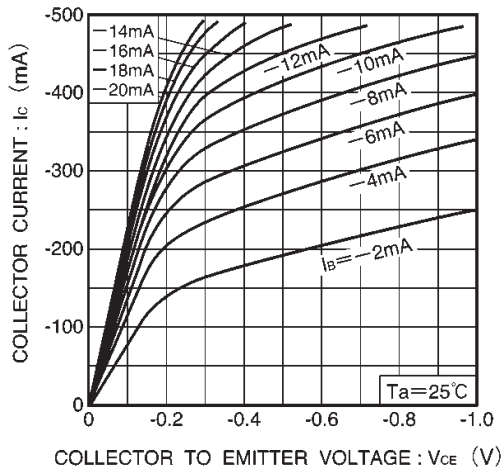


Fig.3 Grounded emitter output characteristics ( II )

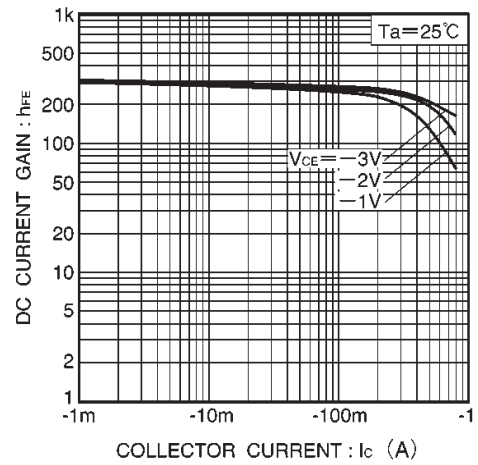


Fig.4 DC current gain vs. collector current

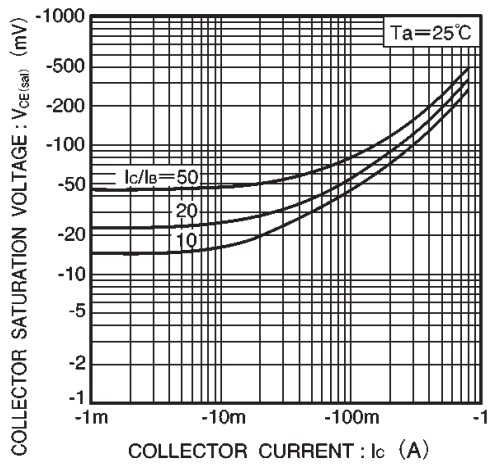


Fig.5 Collector-emitter saturation voltage vs. collector current

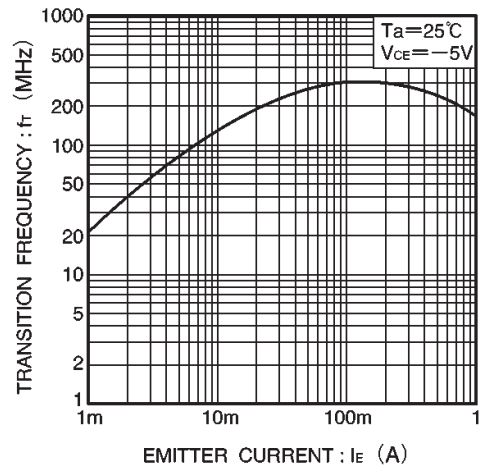


Fig.6 Gain bandwidth product vs. emitter current

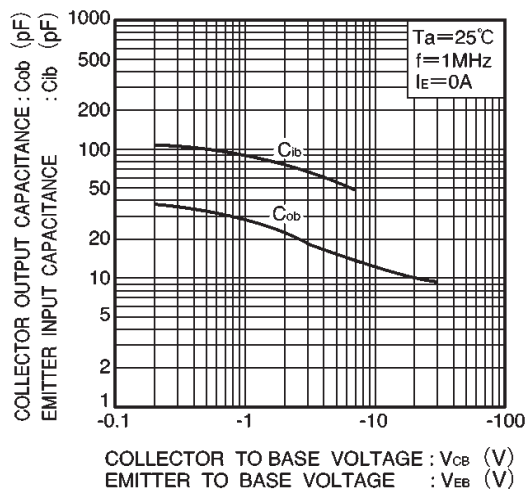


Fig.7 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage