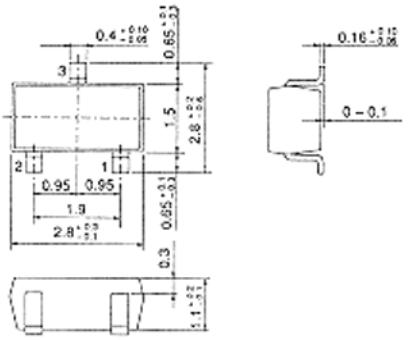
HITACHI

2SC3521

SILICON NPN EPITAXIAL PLANAR

HIGH FREQUENCY AMPLIFIER
SWITCH



(MPAK)

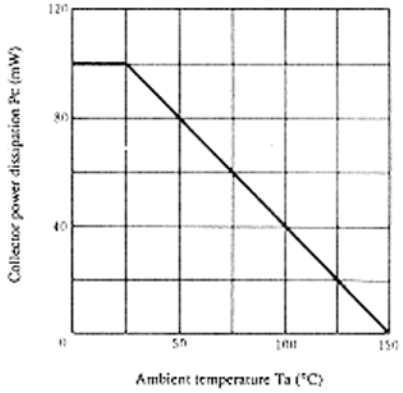
1. Emitter
2. Base
3. Collector

(Dimensions in mm)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC3521	Unit
Collector to base voltage	V_{CBO}	40	V
Collector to emitter voltage	V_{CEO}	15	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

MAXIMUM COLLECTOR DISSIPATION CURVE



■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

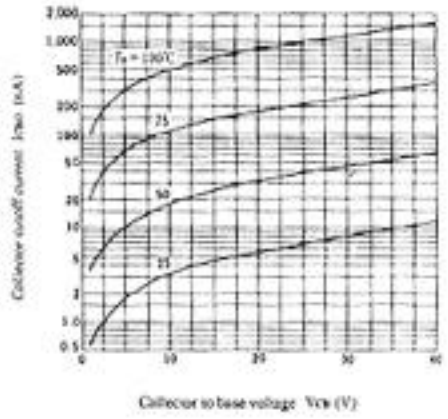
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	40	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 10mA, R_{BE} = ∞	15	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0	5	—	—	V
Collector cutoff current	I_{CBO}	V_{CB} = 20V, I_E = 0	—	—	0.25	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 4V, I_C = 0	—	—	1.0	μA
DC current transfer ratio	h_{FE}*	V_{CE} = 0.5V, I_C = 1mA	45	—	160	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA	—	—	0.3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 10mA, I_B = 1mA	—	—	0.8	V

* The 2SC3521 is grouped by h_{FE} as follows.

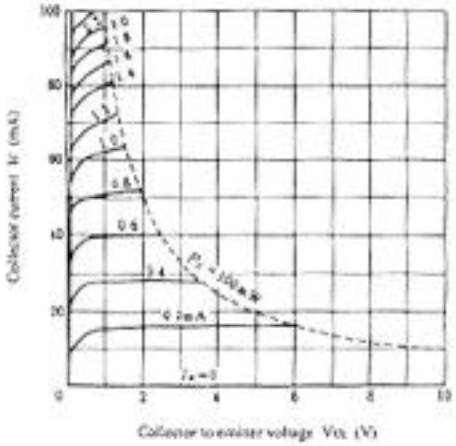
Grade	B	C
Mark	IKB	IKC
h_{FE}	45 to 90	80 to 160

2SC3521

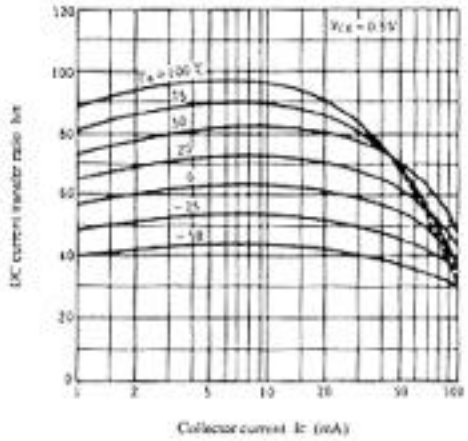
COLLECTOR CUTOFF CURRENT VS. COLLECTOR TO BASE VOLTAGE



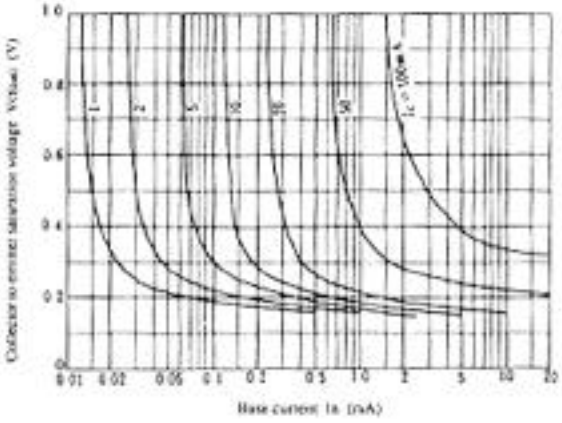
TYPICAL OUTPUT CHARACTERISTICS



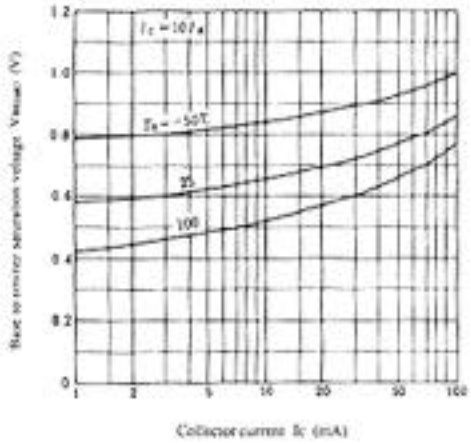
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



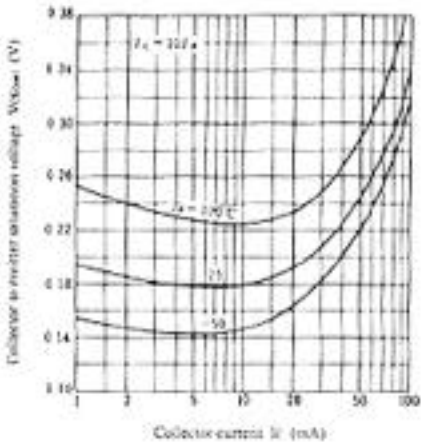
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



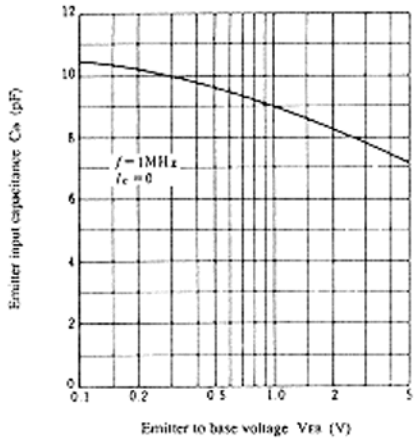
BASE TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



EMITTER INPUT CAPACITANCE VS. EMITTER TO BASE VOLTAGE



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE