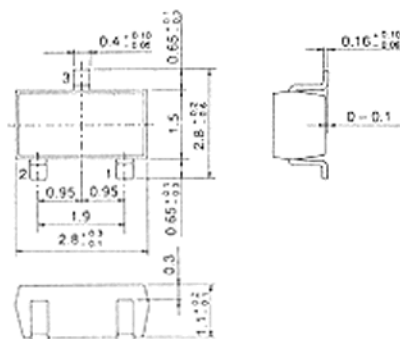


2SC4050

SILICON NPN EPITAXIAL

LOW FREQUENCY AMPLIFIER • SWITCHING



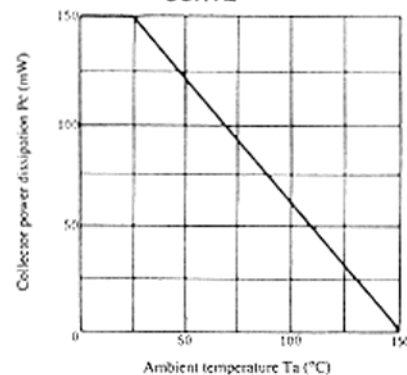
1. Emitter
 2. Base
 3. Collector
- (Dimensions in mm)

(MPAK)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC4050	Unit
Collector to base voltage	V _{CB0}	120	V
Collector to emitter voltage	V _{CE0}	120	V
Emitter to base voltage	V _{EB0}	5	V
Collector current	I _C	100	mA
Collector power dissipation	P _C	150	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	120	—	—	V
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	120	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	5	—	—	V
Collector cutoff current	I _{CBO}	V _{CB} = 70V, I _E = 0	—	—	0.1	μA
Emitter cutoff current	I _{EBO}	V _{EB} = 2V, I _C = 0	—	—	0.1	μA
DC current transfer ratio	h _{FE} *	V _{CE} = 12V, I _C = 2mA**	250	—	800	
Collector to emitter saturation voltage	V _{CE(sat)}	I _C = 10mA, I _B = 1mA**	—	—	0.1	V
Base to emitter saturation voltage	V _{BE(sat)}	I _C = 10mA, I _B = 1mA**	—	—	1.1	V

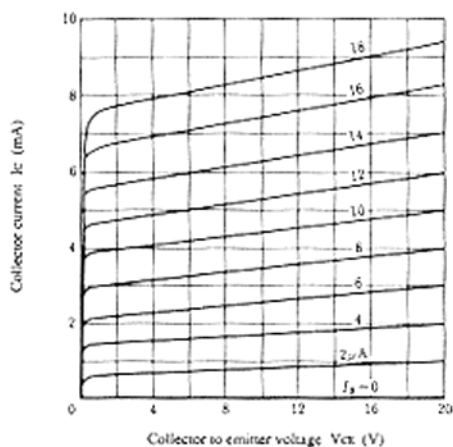
* The 2SC4050 is grouped by h_{FE} as follows.

** Pulse Test

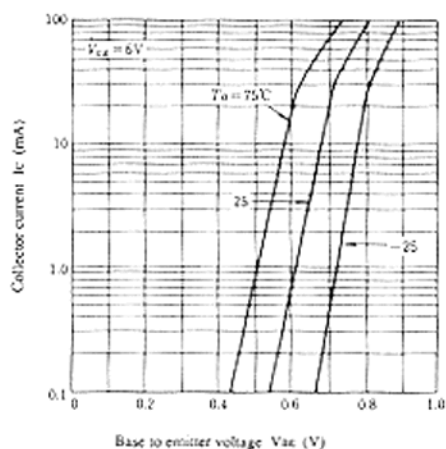
Grade	D	E
Mark	K1D	K1E
h _{FE}	250 to 500	400 to 800

2SC4050

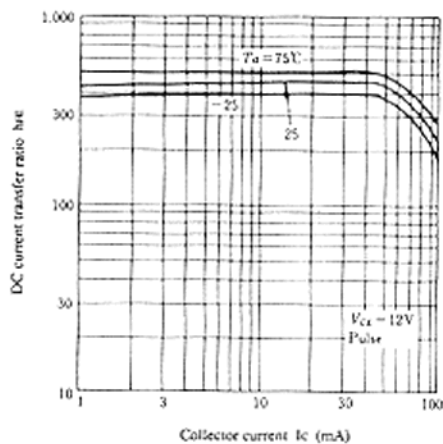
TYPICAL OUTPUT CHARACTERISTICS



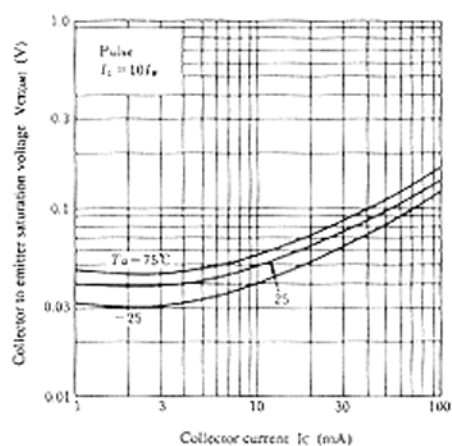
TYPICAL TRANSFER CHARACTERISTICS



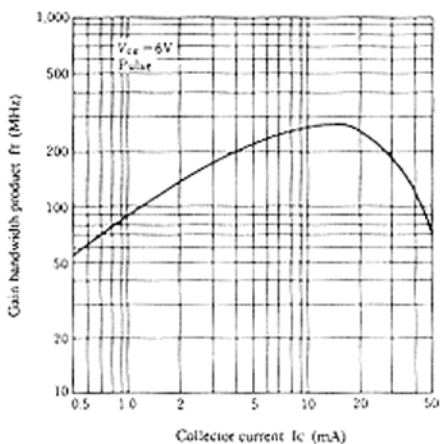
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE

