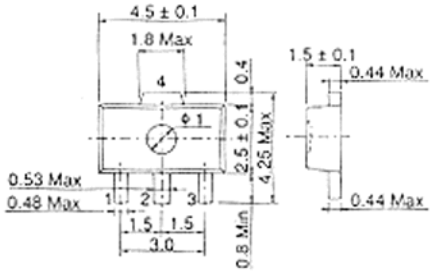
2SC3380

SILICON NPN TRIPLE DIFFUSED

HIGH FREQUENCY HIGH
VOLTAGE AMPLIFIER
HIGH VOLTAGE SWITCH



1. Base
2. Collector
3. Emitter
4. Collector

(Dimensions in mm)

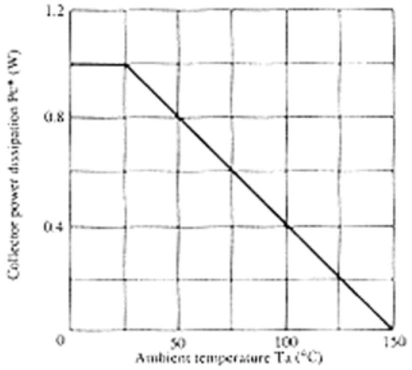
(UPAK)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC3380	Unit
Collector to base voltage	V_{CBO}	300	V
Collector to emitter voltage	V_{CEO}	300	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	100	mA
Collector power dissipation	P_C*	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

* Value on the alumina ceramic board (12.5 × 20 × 0.7mm)

MAXIMUM COLLECTOR DISSIPATION CURVE

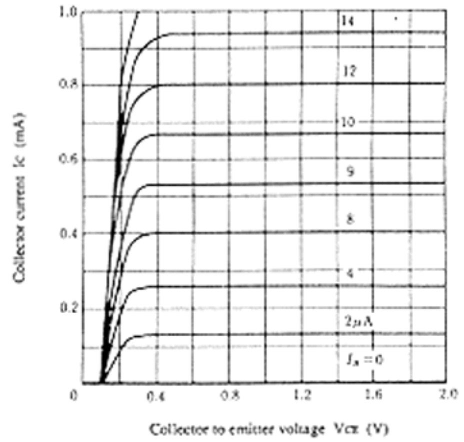


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

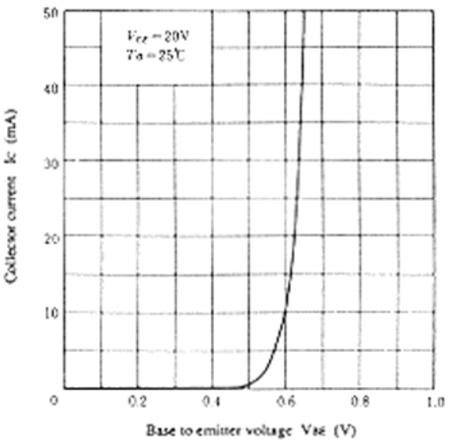
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu A$, $I_E = 0$	300	—	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA$, $R_{BE} = \infty$	300	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu A$, $I_C = 0$	5	—	—	V
Collector cutoff current	I_{CEO}	$V_{CE} = 250V$, $R_{BE} = \infty$	—	—	1	μA
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20mA$, $I_B = 2mA$	—	—	1.5	V
DC current transfer ratio	h_{FE}	$V_{CE} = 20V$, $I_C = 20mA$	30	—	200	
Gain bandwidth product	f_T	$V_{CE} = 20V$, $I_C = 20mA$	—	80	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 20V$, $I_E = 0$, $f = 1MHz$	—	—	4	pF

* Marking is "AS".

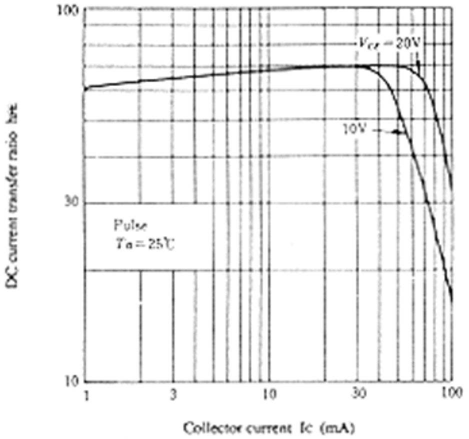
TYPICAL OUTPUT CHARACTERISTICS



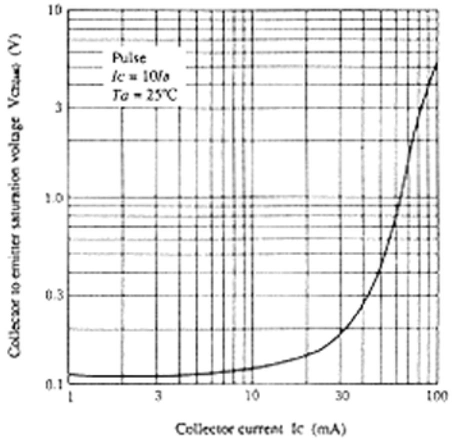
TYPICAL TRANSFER CHARACTERISTICS



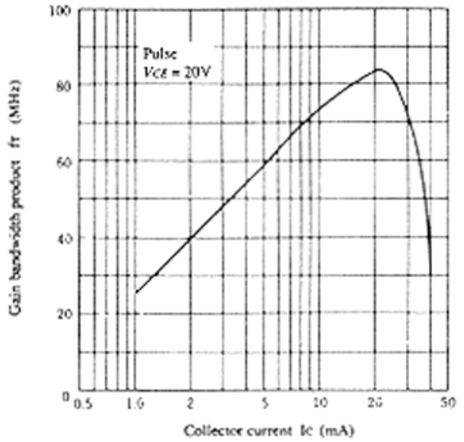
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE