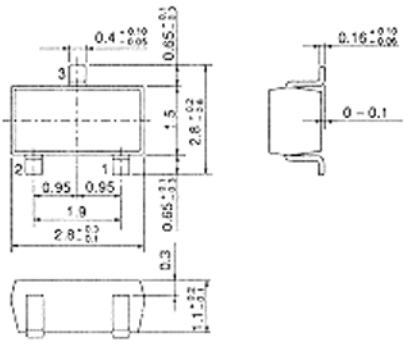
HITACHI

2SC3793

SILICON NPN EPITAXIAL

UHF LOCAL OSCILLATOR



1. Emitter
2. Base
3. Collector

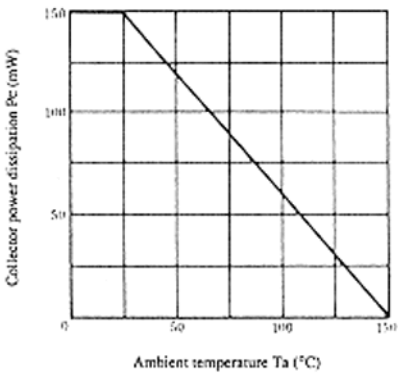
(Dimensions in mm)

(MPAK)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SC3793	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	15	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	50	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



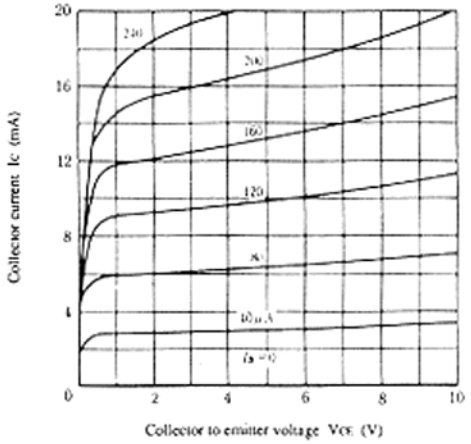
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = 10μA, I_E = 0	20	44	—	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	15	28	—	V
Collector cutoff current	I_{CBO}	V_{CB} =15V, I_E = 0	—	—	1	μA
Emitter cutoff current	I_{EBO}	V_{EB} =3V, I_C = 0	—	—	1	μA
DC current transfer ratio	h_{FE}	V_{CE} = 10V, I_C = 5mA	30	80	200	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 20mA, I_B = 4mA	—	—	0.5	V
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	—	0.7	1	pF
Gain bandwidth product	f_T	V_{CE} = 10V, I_C = 5mA	—	2.9	—	GHz

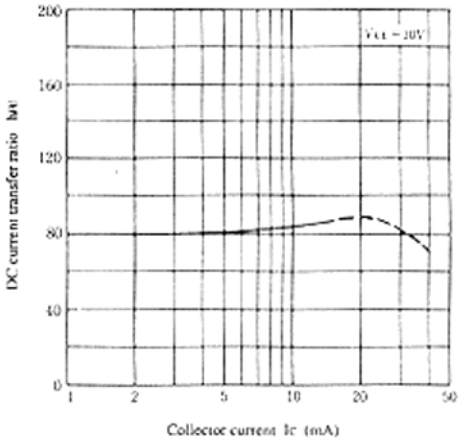
* Marking is "IP-".

2SC3793

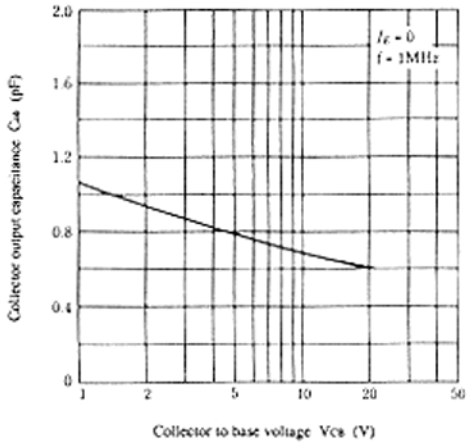
TYPICAL OUTPUT CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT