Ordering number:EN2557B

NPN Epitaxial Planar Silicon Transistor

2SC4188

Ultrahigh-Definition CRT Display Video Output Applications

Features

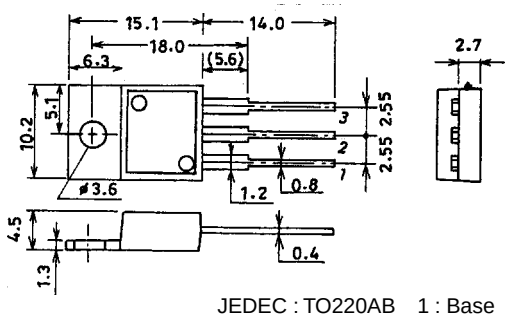
- High breakdown voltage : V_{CEO}≥200V.
- Small reverse transfer capacitance and excellent high frequency characteristic : C_{re}=1.3pF typ.
- Adoption of FBET process.

Package Dimensions

unit:mm

2010C

[2SC4188]



JEDEC : TO220AB
EIAJ : SC46

1 : Base
2 : Collector
3 : Emitter

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		200	V
Collecor-to-Emitter Voltage	V_{CEO}		200	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		100	mA
Collector Current (Pulse)	I_{CP}		200	mA
Collector Dissipation	P_C		1.5	W
		Tc=25˚C	10	W
Junction Tempreature	Tj		150	˚C
Storage temperature	Tstg		–55 to +150	˚C

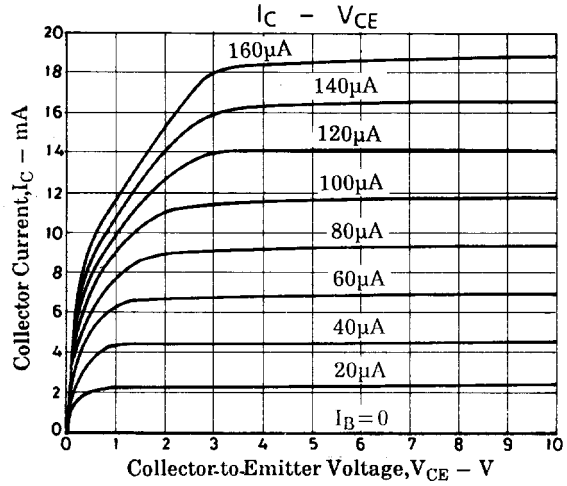
The 2SC4188 is classified by 10mA h_{FE} as follows :

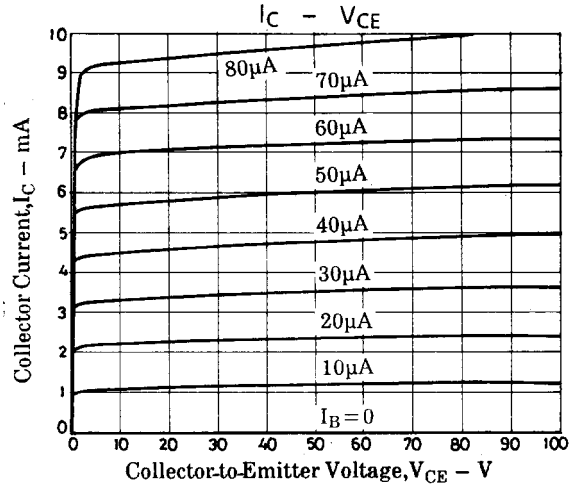
40 C 80	60 D 120	100 E 200	160 F 320

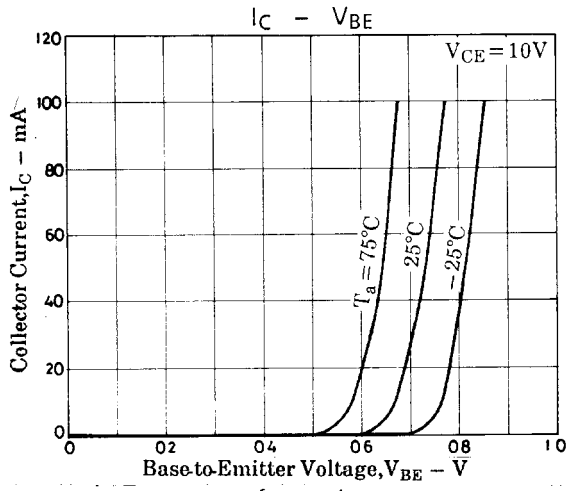
SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

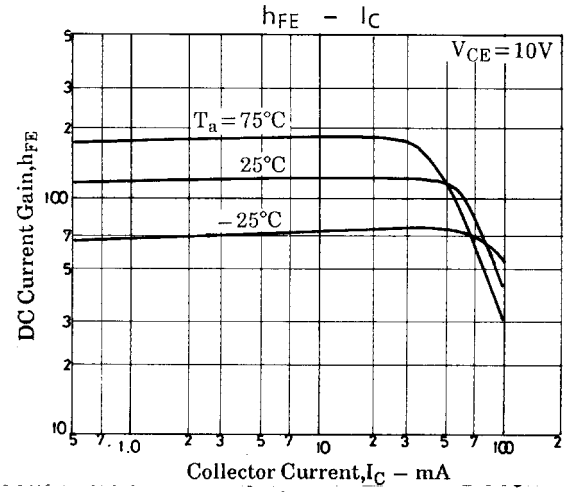
Electrical Characteristics at Ta = 25˚C

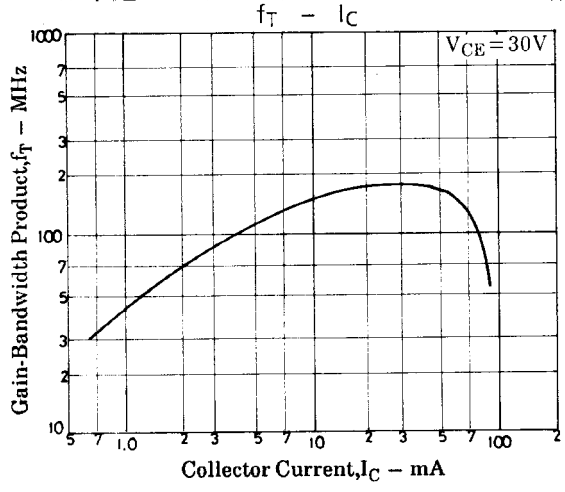
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=150V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=10V, I_C=10mA	40*		320*	
Gain-Bandwidth Product	f_T	V_{CE}=30V, I_C=10mA		150		MHz
Output Capacitance	C_{ob}	V_{CB}=30V, f=1MHz		1.8		pF
Reverse Transfer Capacitance	C_{re}	V_{CB}=30V, f=1MHz		1.3		pF
Collector-to-Emitter Saturatin Voltage	$V_{CE(sat)}$	I_C=20mA, I_B=2mA			0.6	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=20mA, I_B=2mA			1.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	200			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	200			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	5			V

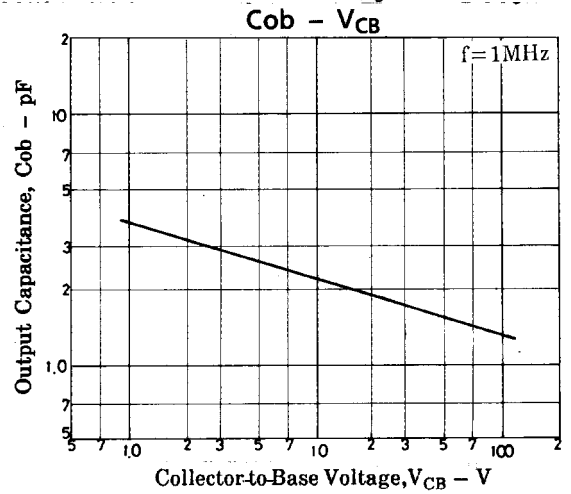


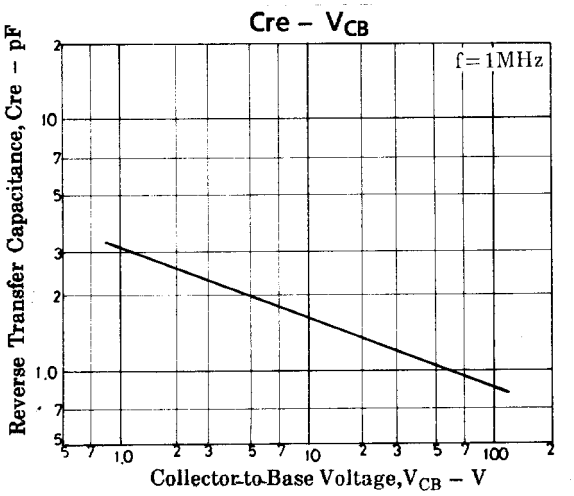


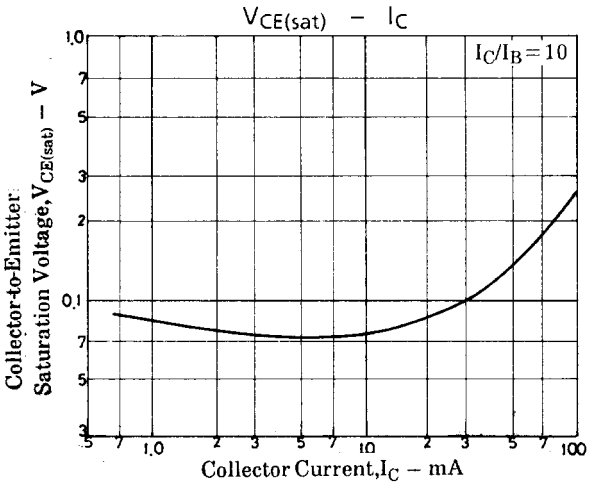


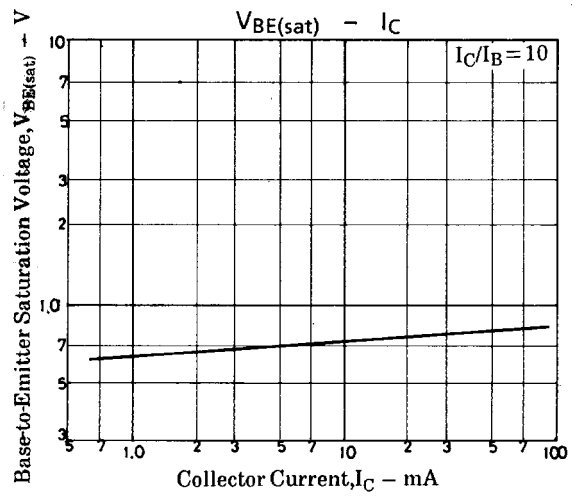


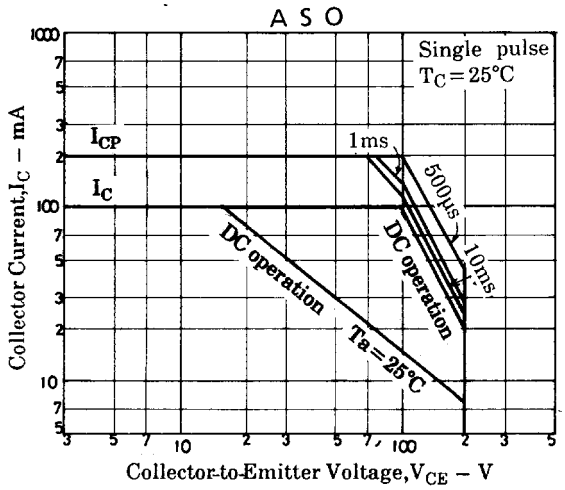


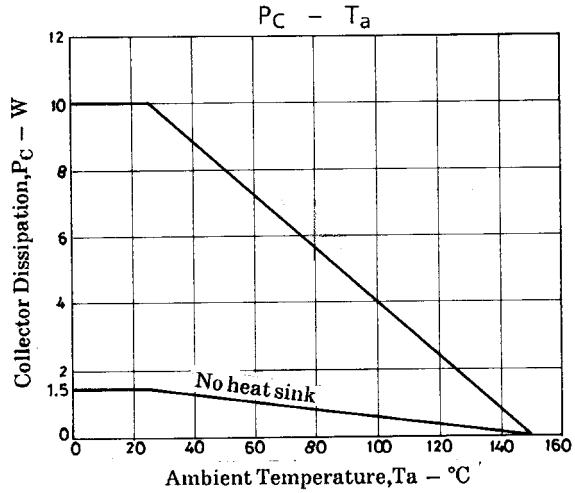



Cre – VCB
f=1MHz
Reverse Transfer Capacitance, Cre – pF
Collector-to-Base Voltage, VCB – V


VCE(sat) – IC
IC/IB=10
Collector-to-Emitter Saturation Voltage, VCE(sat) – V
Collector Current, IC – mA


VBE(sat) – IC
IC/IB=10
Base-to-Emitter Saturation Voltage, VBE(sat) – V
Collector Current, IC – mA


A S O
Single pulse
TC=25°C
ICP
IC
1ms
500μs
10ms
DC operation
DC operation
Ta=25°C
Collector Current, IC – mA
Collector-to-Emitter Voltage, VCE – V


PC – Ta
No heat sink
Collector Dissipation, PC – W
Ambient Temperature, Ta – °C