Ordering number:EN1800E

NPN Triple Diffused Planar Silicon Transistor

2SC3675

900V/100mA High-Voltage Amplifier High-Voltage Switching Applications

Applications

· High voltage amplifiers.
· High-voltage switching applications.
· Dynamic focus applications.

Features

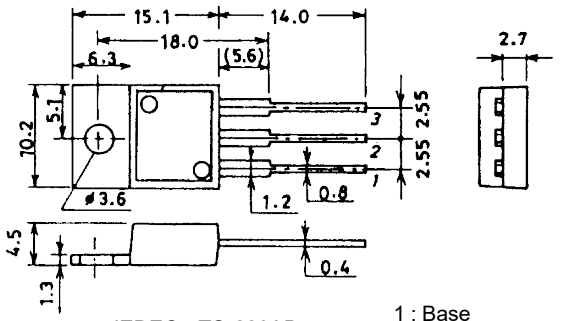
· High breakdown voltage (V_{CEO} min=900V).
· Small Cob (Cob typ=2.8pF).
· Wide ASO (Adoption of MBIT process).
· High reliability (Adoption of HVP process).

Package Dimensions

unit:mm

2010C

[2SC3675]



JEDEC : TO-220AB
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}		1500	V
Collector-to-Emitter Voltage	V_{CEO}		900	V
Emitter-to-Base Voltage	V_{EBO}		5	V
Collector Current	I_C		100	mA
Collector Current (Pulse)	I_{CP}		300	mA
Collector Dissipation	P_C	Tc=25°C	10	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		–55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=900V, I_E=0			10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			10	μA
DC Current Gain	h_{FE}	V_{CE}=5V, I_C=10mA	30			
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=10mA		6		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=20mA, I_B=4mA			5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=20mA, I_B=4mA			2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=1mA, I_E=0	1500			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	900			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=1mA, I_C=0	5			V
Output Capacitance	Cob	V_{CB}=100V, f=1MHz		2.8		pF

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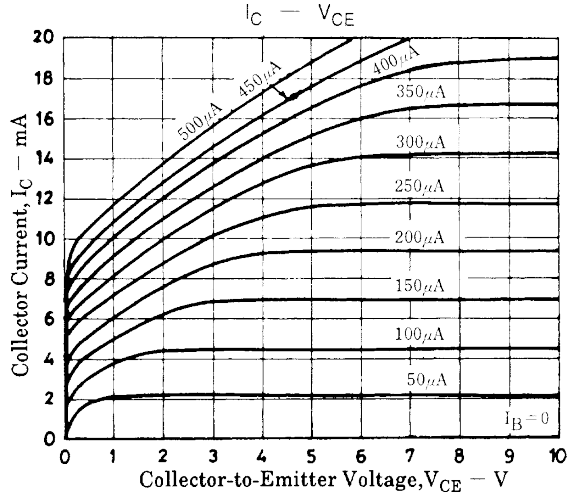
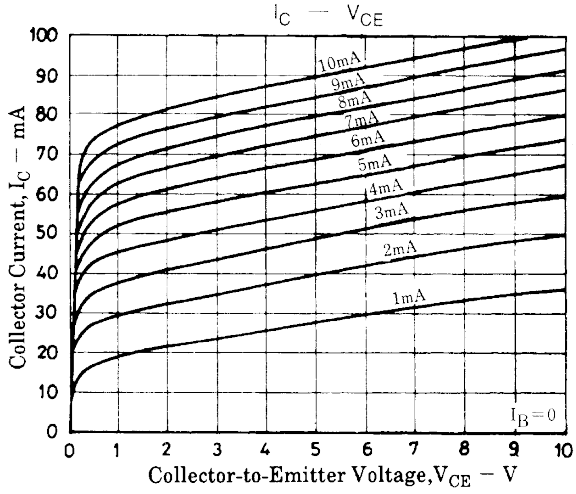
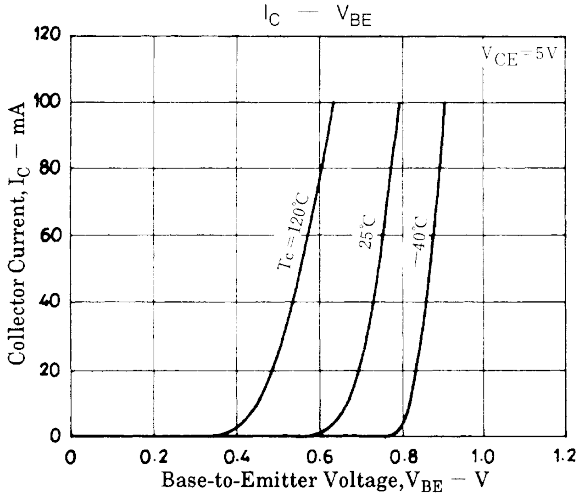
I_C — V_{CE}



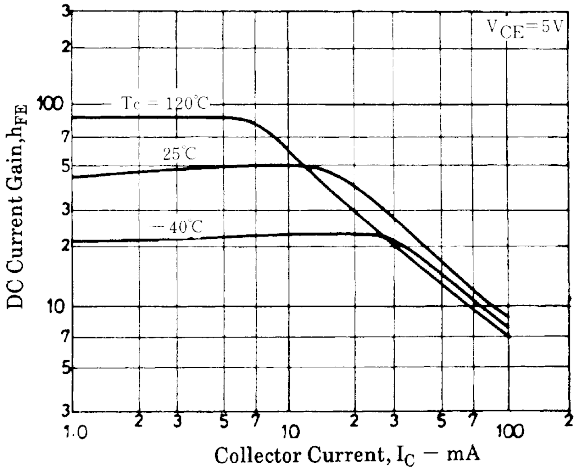
I_C — V_{CE}



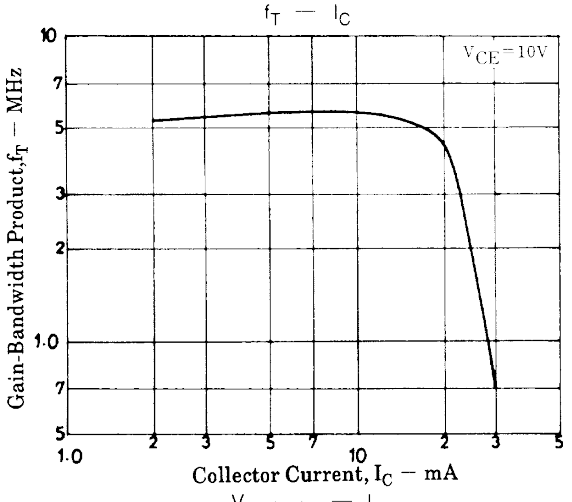
I_C — V_{BE}



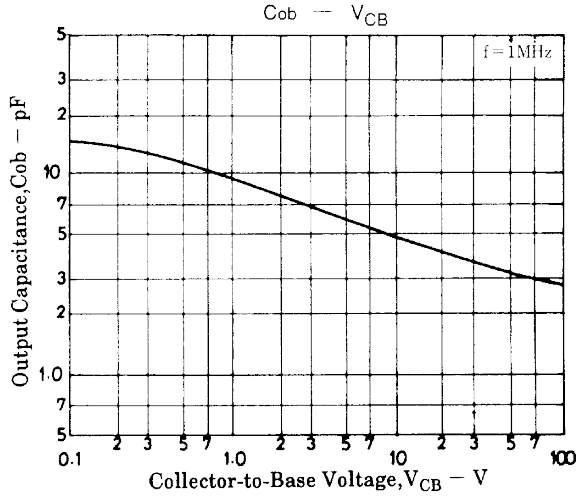
h_{FE} — I_C



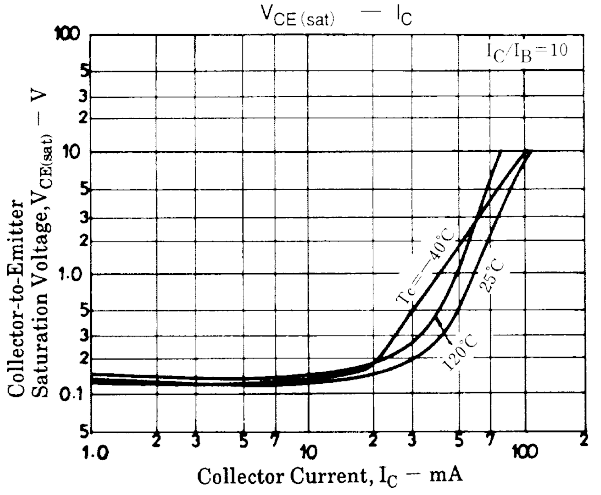
f_T — I_C



Cob — V_{CB}



$V_{CE(sat)}$ — I_C



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