Ordering number: EN 751C

SANYO

No.751C

2SD1111

NPN Epitaxial Planar Silicon Darlington Transistor

Driver Applications

Applications

. Motor drivers, printer hammer drivers, relay drivers, voltage regulator control

Features

. High DC current gain (5000 or greater).
. Large current capacity and wide ASO.
. Low saturation voltage ($V_{CE(sat)}$=0.8V typ).

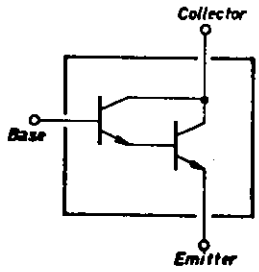
Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	10	V
Collector Current	I_C	0.7	A
Collector Current(Pulse)	I_{CP}	2	A
Collector Dissipation	P_C	600	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

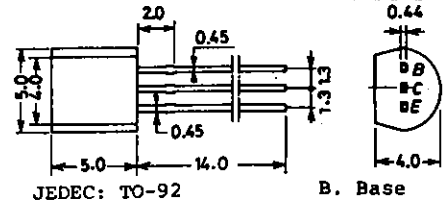
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=40V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=8V, I_C=0			0.1	μA
DC Current Gain	$h_{FE}(1)$	V_{CE}=2V, I_C=50mA	5000			
	$h_{FE}(2)$	V_{CE}=2V, I_C=500mA	4000			
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=50mA		200		MHz
Output Capacitance	c_{ob}	V_{CB}=10V, f=1MHz		10		pF
C-E Saturation Voltage	$V_{CE(sat)}$	I_C=100mA, I_B=0.1mA		0.8	1.2	V
B-E Saturation Voltage	$V_{BE(sat)}$	I_C=100mA, I_B=0.1mA		1.3	2.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	80			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	50			V
E-B Breakdown Voltag	$V_{(BR)EBO}$	I_E=10μA, I_C=0	10			V

Electrical Connection



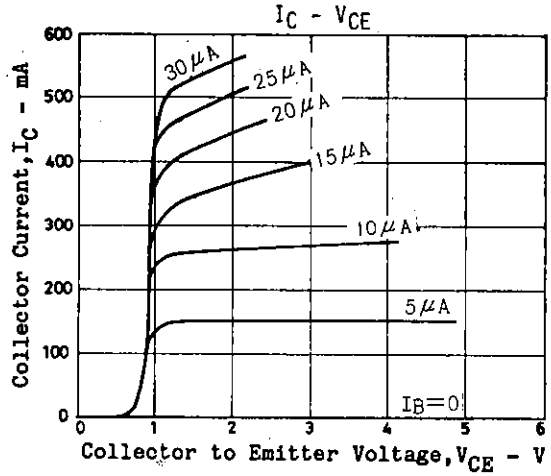
Package Dimensions 2003A
(unit: mm)



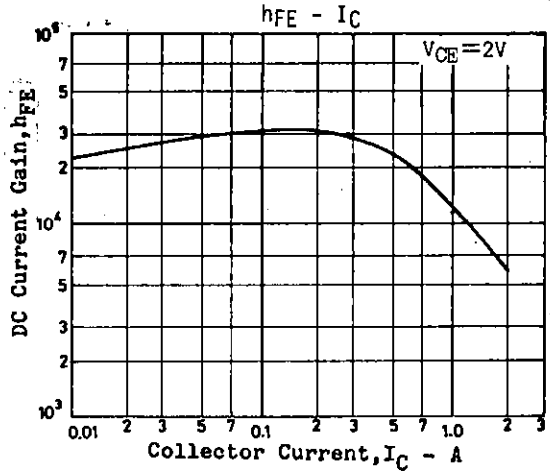
JEDEC: TO-92
EIAJ : SC-43
SANYO: NP

B. Base
C. Collector
E. Emitter

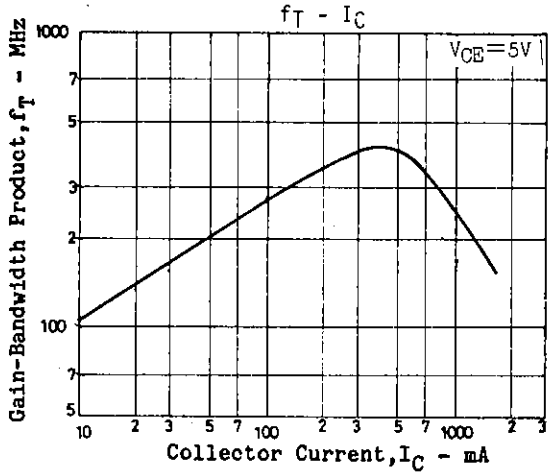
I_C - V_{CE}



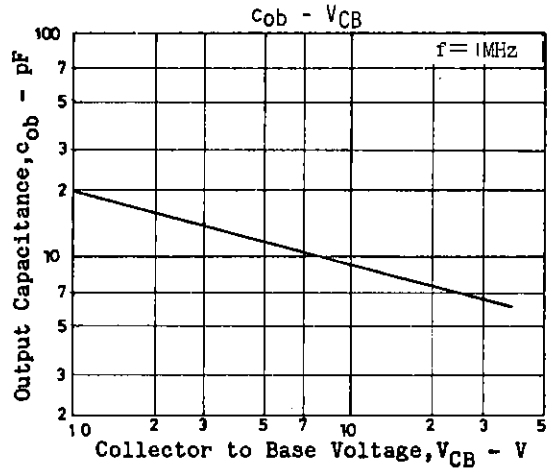
h_{FE} - I_C



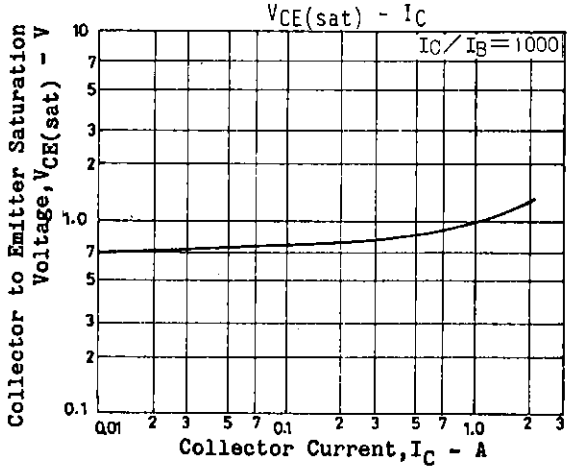
f_T - I_C



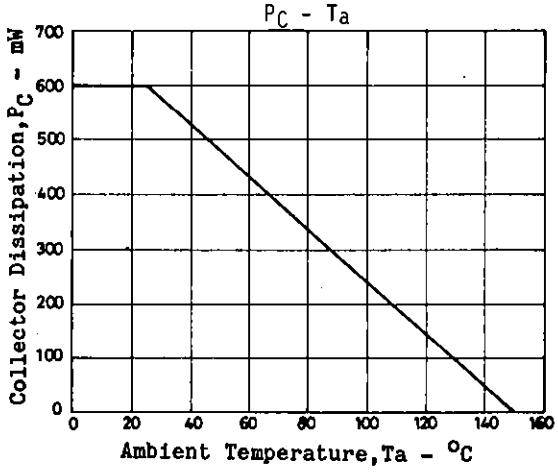
C_{ob} - V_{CB}



$V_{CE(sat)}$ - I_C



P_C - T_a



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