PROMAX-JOHNTON

PJB649A

PNP Epitaxial Silicon Transistor

- Complementary pair with PJD669A
- *Value at Tc = 25°C

TO-126

Pin : 1. Emitter
2. Collector
3. Base

ABSOLUTE MAXIMUM RATINGS (TA = 25 °C)

Item	Symbol	2SB649A	Unit
Collector to base voltage	V_{CBO}	-180	V
Collector to emitter voltage	V_{CEO}	-160	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	Ic	-1.5	A
Collector peak current	$Ic_{(peak)}$	-3	A
Collector power dissipation	Pc	1	W
	Pc*	20	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

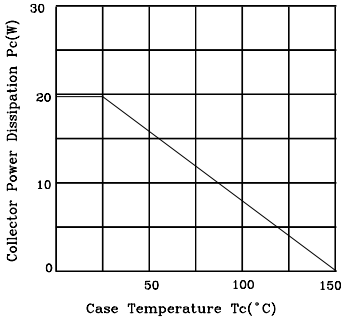
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Item	Symbol	Tes Condition	2SD649A			Unit
			Min	Typ	Max	
Collector to base breakdown voltage	$V_{(BR)CBO}$	I_C = -1mA, I_E = 0	-180	--	--	V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	I_C = -10mA, R_{BE} = ∞	-160	--	--	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	I_E = -1mA, I_C = 0	-5	--	--	V
Collector cutoff current	I_{CBO}	V_{CB} = -160V,I_E =0	--	--	-10	μ A
DC Current transfer ratio	h_{FE1}*	V_{CE} = -5V,I_C = -150mA	60	--	200	
	h_{FE2}	V_{CE} = -5V,I_C = -500mA**	30	--	--	
Collector to emitter saturation voltage	$V_{CE\ (sat)}$	I_C = -500mA,I_B = -50mA	--	--	-1	V
Base to emitter voltage	V_{BE}	V_{CE} = -5V, I_B = -150mA	--	--	-1.5	V
Gain bandwidth product	f_T	V_{CE} = -5V, I_C = -150mA	--	140	--	MHz
Collector output capacitance	C_{Ob}	V_{CB}= -10V, I_E = 0, f = 1MHz	--	27	--	pF

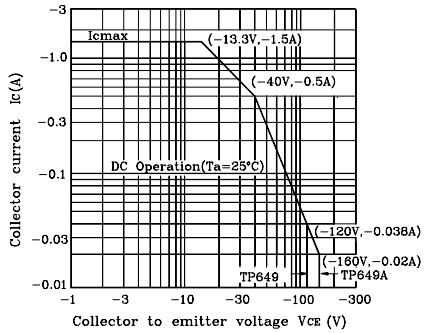
*The PJB649A are grouped by h_{FE1} as follows.
**Pulse Test

	B	C	D
PJ649A	60 to 120	100 to 200	--

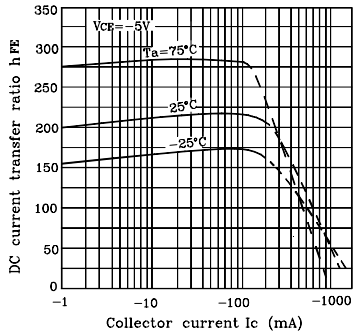
MAXIMUM COLLECTOR DISSIPATION CURVE



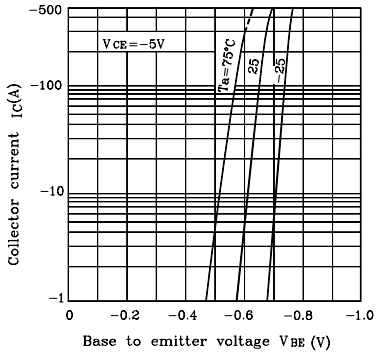
AREA OF SAFE OPERATION



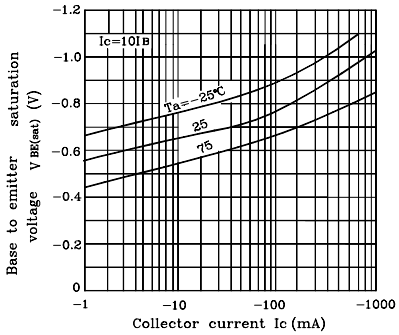
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



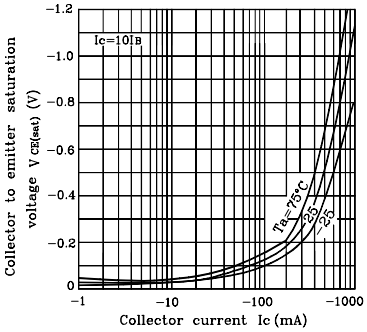
TYPICAL TRANSFER CHARACTERISTICS



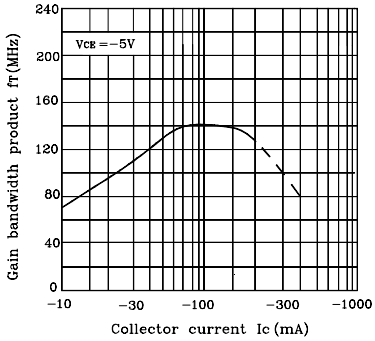
BASE TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



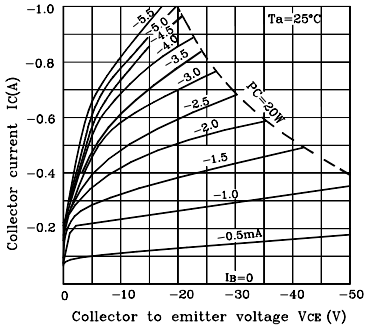
COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT VS. COLLECTOR CURRENT



TYPICAL OUTPUT CHARACTERISTICS



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE