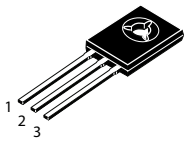
WEITRON

2SB649/2SB649A

PNP Epitaxial Planar Transistors

Pb Lead(Pb)-Free



TO-126C

ABSOLUTE MAXIMUM RATINGS(TA=25ºC)

Rating	Symbol	2SB649	2SB649A	Unit
Collector-Emitter Voltage	V_{CBO}	-180		V
Collector-Base Voltage	V_{CEO}	-120	-160	V
Emitter-Base Voltage	V_{EBO}	6.0		V
Collector Current	I_C	-1.5		A
Power Disspation	P_D	1.0		W
Junction Temperature	T_j	+150		˚C
Storage Temperature	T_{stg}	-55 to +150		˚C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) (Countinued)

Characteristics		Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage I_C = -1.0mA, I_E = 0		$V_{(BR)CBO}$	-180	-	-	V
Collector-Base Breakdown Voltage I_C = -10mA, I_B = 0	2SB649 2SB649A	$V_{(BR)CEO}$	-120 -160	-	-	V
Emitter-Base Breakdown Voltage I_C = 0, I_E = -1.0mA		$V_{(BR)EBO}$	-5.0	-	-	V
Collector Cutoff Current V_{CB} = -160V, I_E = 0		I_{CBO}	-	-	-10	μA
Emitter Cutoff Current V_{EB} = -4.0V, I_C = 0		I_{EBO}	-	-	-10	μA

ON CHARACTERISTICS

DC Current Gain V_{CE} = -5.0V, I_C = -150mA	2SB649 2SB649A	$h_{FE(1)}$	60 60	-	320 200	-
V_{CE} = -5.0V, I_C = -500mA		$h_{FE(2)}$	30	-	-	
Collector-Emitter Saturation Voltage I_C = -500mA, I_B = -50mA		$V_{CE(sat)}$	-	-	-1.0	V
Base-Emitter Voltage V_{CE} = -5.0V, I_C = -150mA		V_{BE}	-	-	-1.5	V
Transition frequency V_{CE} = -5.0V, I_C = -150mA		f_T	-	140	-	MHz
Collecotr Output Capacitance V_{CB} = -10V, I_E = 0, f = 1MHz		C_{ob}	-	27	-	pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	B	C	D
Range	60-120	100-200	160-320

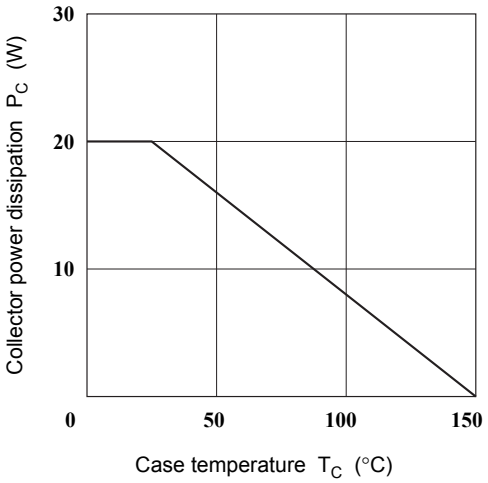


Fig.1 Maximum Collector Dissipation Curve

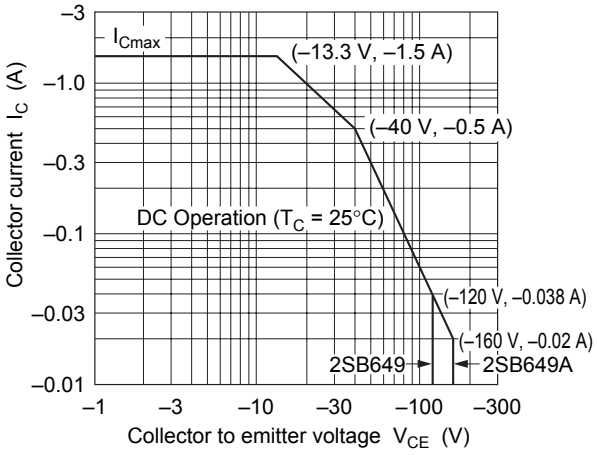


Fig.2 Area of Safe Operation

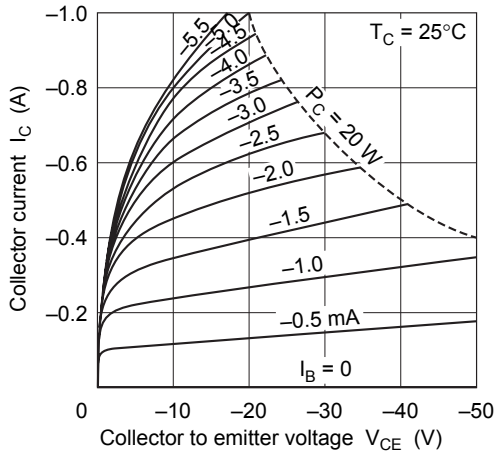


Fig.3 Typical Output Characteristecs

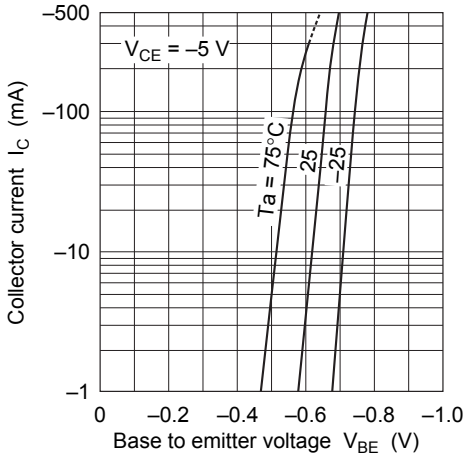


Fig.4 Typical Transfer Characteristics

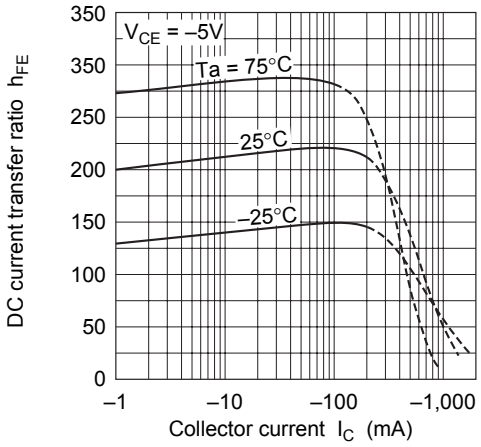


Fig.5 DC Current Transfer Ratio vs. Collector Current

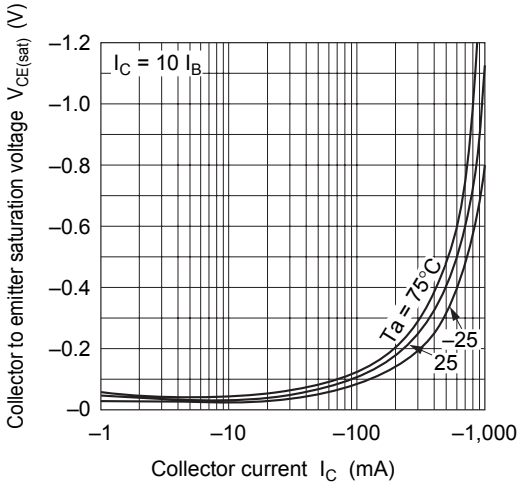


Fig.6 Collector to Emitter Saturation Voltage vs. Collector Current

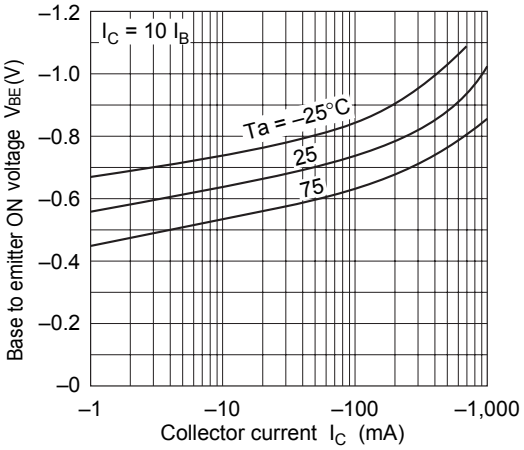


Fig.7 Base to Emitter Voltage vs. Collector Current

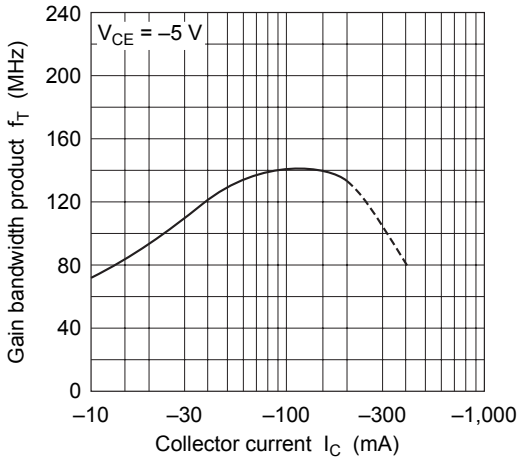


Fig.8 Gain Bandwidth Product vs. Collector Current

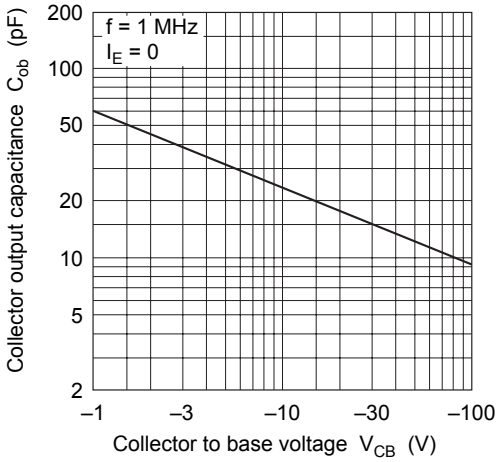
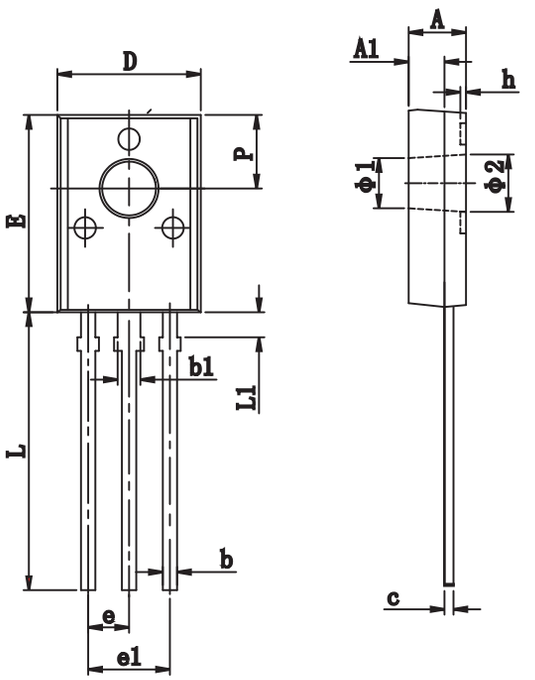


Fig.9 Collector Output Capacitance vs. Collector to Base Voltage

TO-126C Outline Dimensions

unit:mm



TO-126C		
Dim	**Min**	**Max**
A	3.000	3.400
A1	1.800	2.200
b	0.660	0.860
b1	1.170	1.370
c	0.450	0.600
D	7.800	8.200
E	10.800	11.200
e	2.280 TYP	
e1	4.460	4.660
L	15.100	15.500
L1	1.300	1.500
P	4.040	4.240
Φ1	2.700	2.900
Φ2	3.100	3.300