Elektronische Bauelemente

2SB649/2SB649A

PNP Type

Plastic Encapsulate Transistors

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

Power smplifier applications

Power dissipation

P_{CM} : 1 W （Tamb=25℃）

Collector current

I_{CM} : - 1.5 A

Collector-base voltage

$V_{(BR)CBO}$: -180 V

Collector-emitter voltage

V_{CEO}

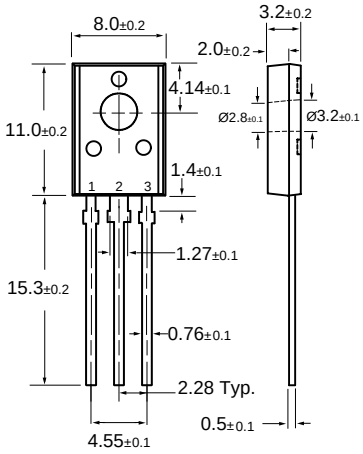
2SB649 : -120 V

2SB649A : -160 V

Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to +150

TO-126C



1: Emitter
2: Collector
3: Base

Dimensions in Millimeters

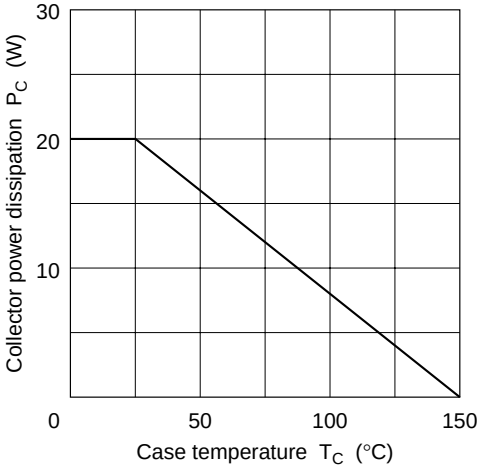
ELECTRICAL CHARACTERISTICS（Tamb=25℃ unless otherwise specified）

Parameter	Symbol	Test conditions		MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=-1mA , I_E=0		-180		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic=-10mA , I_B=0	2SB649 2SB649A	-120 -160		V
Collector-emitter breakdown voltage	$V_{(BR)EBO}$	I_E=-1mA, I_c=0		-5		V
Collector cut-off current	I_{CBO}	V_{CB}=-160V, I_E=0			-10	μA
Emitter cut-off current	I_{EBO}	V_{EB}= -4V, I_C=0			-10	μA
DC current gain	$h_{FE(1)}$ *	V_{CE}=-5V, I_C= -150mA	2SB649 2SB649A	60 60	320 200	
	$h_{FE(2)}$ *	V_{CE}=-5V, I_C= -500mA		30		
Collector-emitter saturation voltage	$V_{CE\ (sat)}$ *	I_C=-500 mA, I_B=-50mA			-1	V
Base-emitter voltage	V_{BE} *	V_{CE}=-5V,I_C=-150mA			-1.5	V
Transition frequency	f_T	V_{CE}=-5V, I_C=-150 mA		140		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V , I_E=0,f=1MHz		27		pF

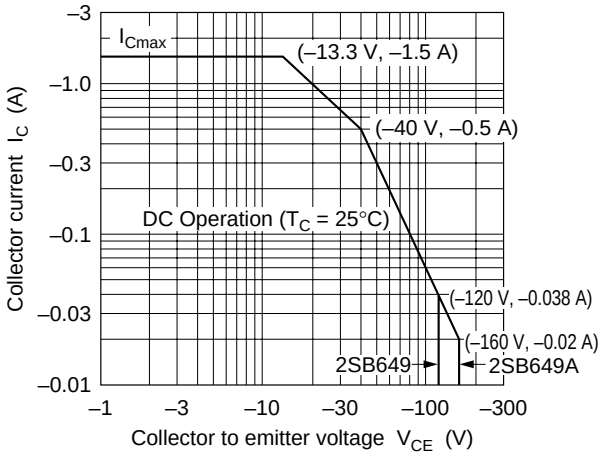
* The 2SB649 and 2SB649A are grouped by h_{FE1} as follows.

Rank	B	C	D
2SB649	60 - 120	100 - 200	160 - 320
2SB649A	60 - 120	100 - 200	----

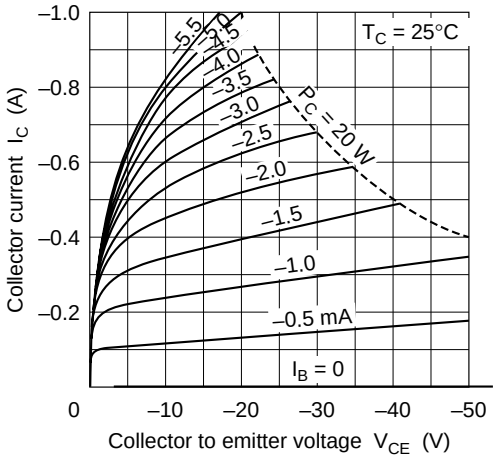
Maximum Collector Dissipation Curve



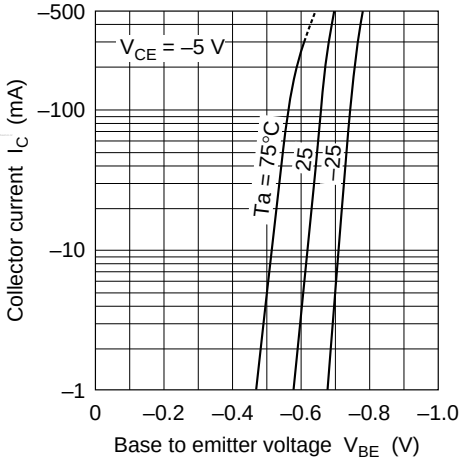
Area of Safe Operation



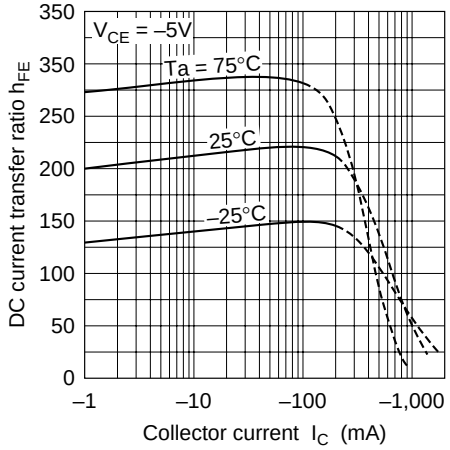
Typical Output Characteristics



Typical Transfer Characteristics



DC Current Transfer Ratio vs. Collector Current



Collector to Emitter Saturation Voltage vs. Collector Current