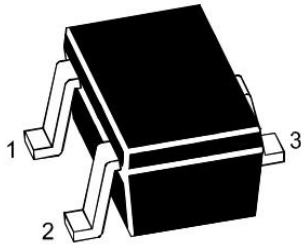


PNP EPITAXIAL PLANAR TRANSISTOR

CMBT5401W
SOT-323
Plastic Package



1. BASE
2. EMITTER
3. COLLECTOR

for high voltage amplifier applications

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

PARAMETER	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	160	V
Collector Emitter Voltage	V_{CEO}	150	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Continuous	I_C	600	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

PARAMETER	SYMBOL	Min.	Max.	UNIT
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 50\text{ mA}$	h_{FE}	50 60 50	240	
Collector Base Cutoff Current at $V_{CB} = 120\text{ V}$	I_{CBO}		50	nA
Emitter Base Cutoff Current at $V_{EB} = 3\text{ V}$	I_{EBO}		50	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	160		V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	150		V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5		V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$ at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$	$V_{CE(sat)}$		0.2 0.5	V
Base Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$ at $I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$	$V_{BE(sat)}$		1 1	V
Gain Bandwidth Product at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	300	MHz
Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{obo}		6	pF

CHARACTERISTIC CURVES

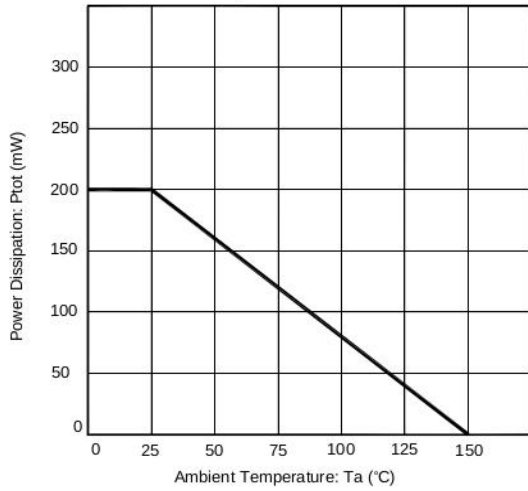


Fig.1 Max Power Dissipation vs Ambient Temperature

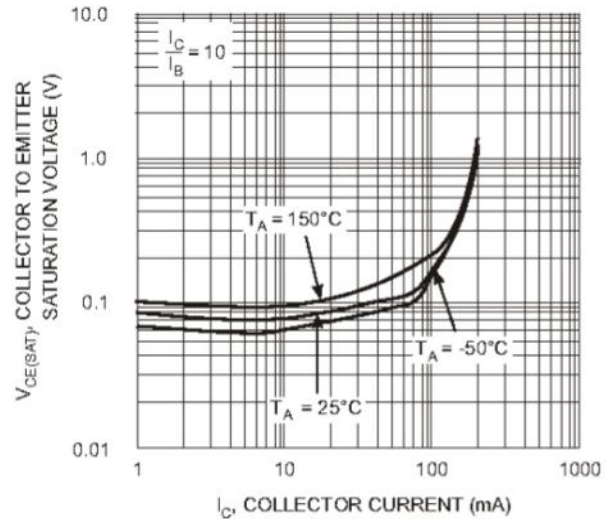


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

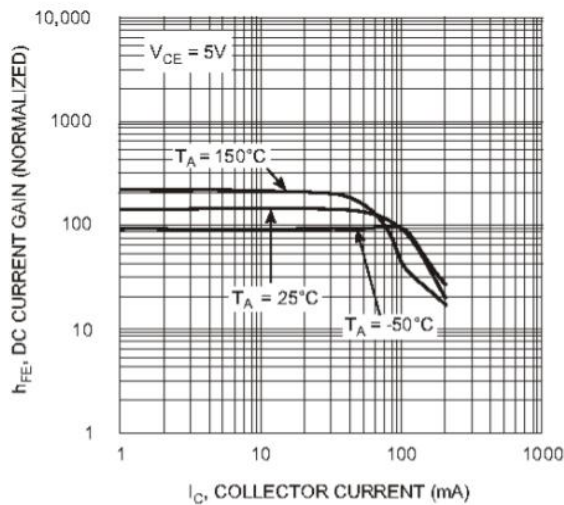


Fig. 3, DC Current Gain vs. Collector Current

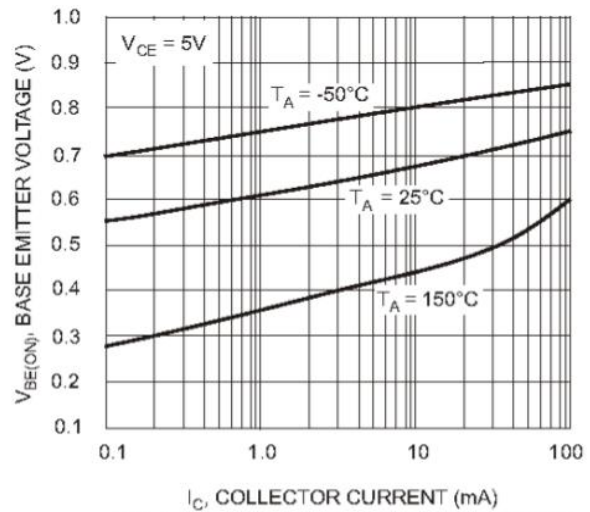


Fig. 4, Base Emitter Voltage vs. Collector Current

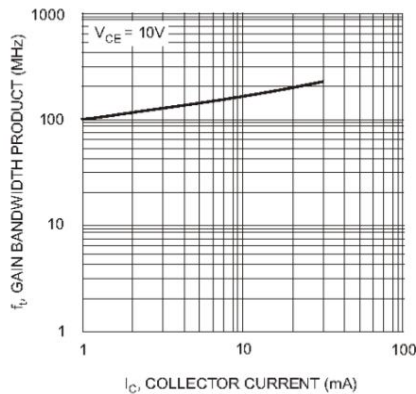


Fig. 5, Gain Bandwidth Product vs Collector Current



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Customer Notes:

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

DICLAIMER

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD is believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).



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