Ordering number : ENN2034B

NPN Triple Diffused Planar Silicon Transistor

2SD1666

Low-Frequency Power Amplifier Applications

Applications

- Low-frequency general-purpose power amplifier application.

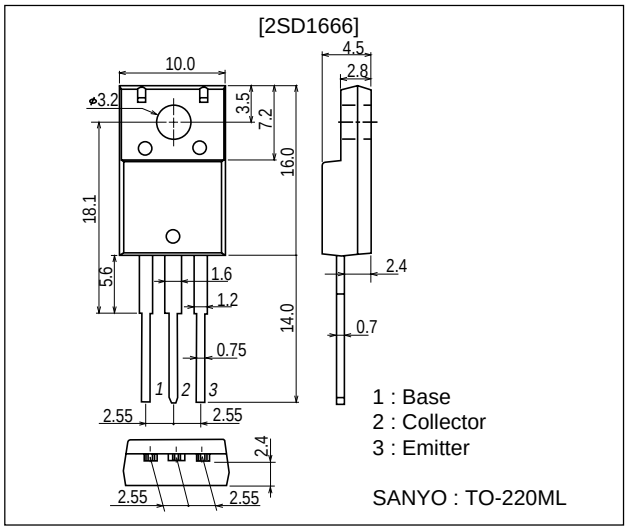
Features

- Wide ASO(Adoption of MBIT process).
- Mycaless package facilitating mounting.
- High reliability.

Package Dimensions

unit : mm

2041A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		60	V
Collector-to-Emitter Voltage	V_{CEO}		60	V
Emitter-to-Base Voltage	V_{EBO}		6	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}		8	A
Collector Dissipation	P_C		2	W
		Tc=25°C	25	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-40 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=40V, I_E=0			100	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=4V, I_C=0			100	μA

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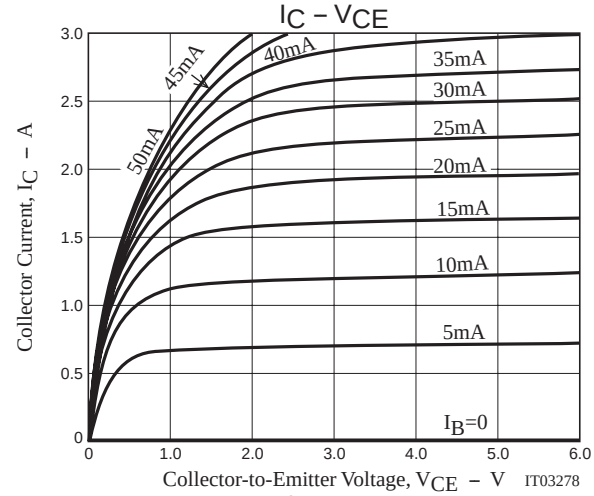
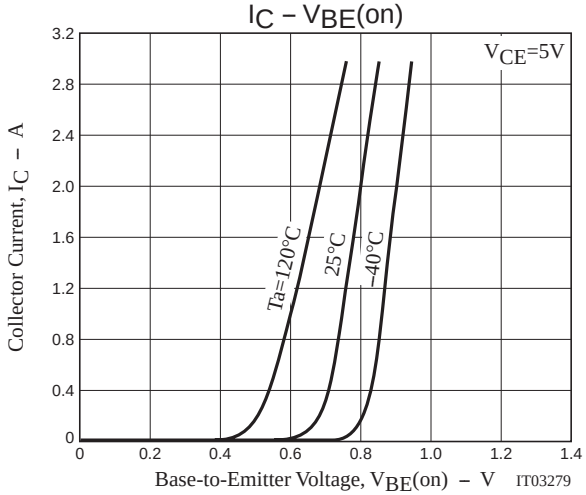
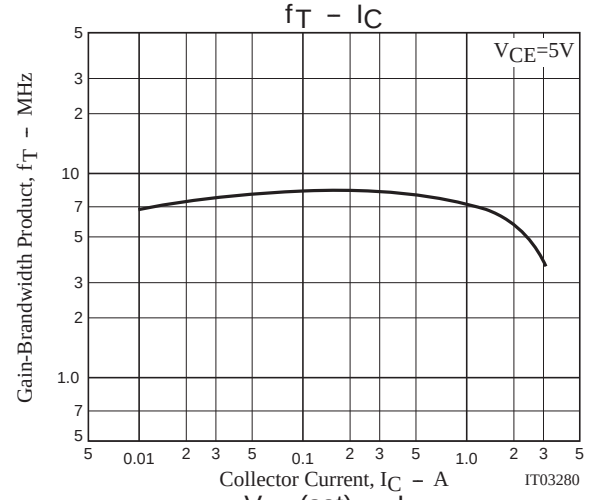
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	$h_{FE}1$	V_{CE}=5V, I_C=0.5A	70*		280*	
	$h_{FE}2$	V_{CE}=5V, I_C=3A	20			
Gain-Bandwidth Product	f_T	V_{CE}=5V, I_C=0.5A		8		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		60		pF
Collector-to-Emitter Saturation Voltage	V_{CE}(sat)	I_C=2A, I_B=0.2A		0.4	1	V
Base-to-Emitter Voltage	V_{BE}	V_{CE}=5A, I_C=0.5A		0.7	1	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=1mA, I_E=0	60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=5mA, R_{BE}=∞	60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=1mA, I_C=0	6			V

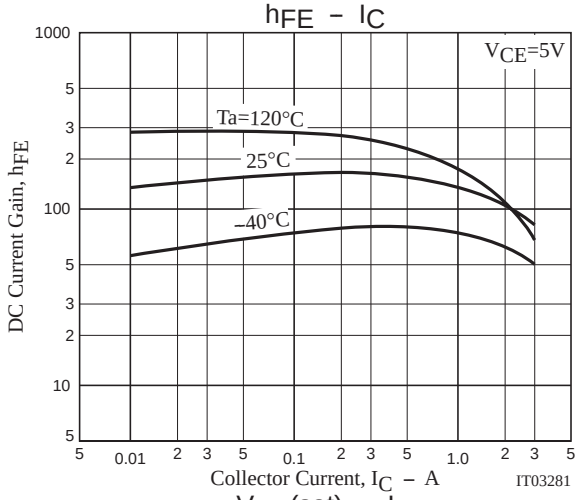
* : The 2SD1666 are classified by 0.5A h_{FE} as follows :

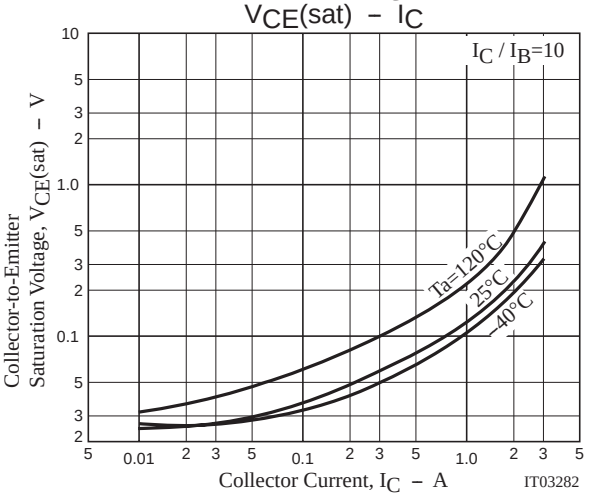
Rank	Q	R	S
h_{FE}	70 to 140	100 to 200	140 to 280

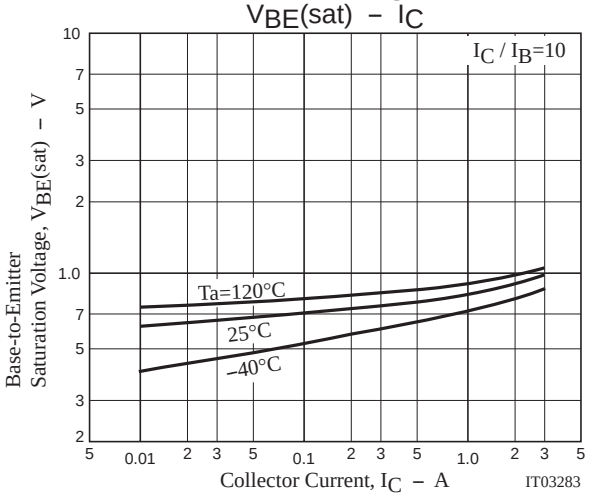




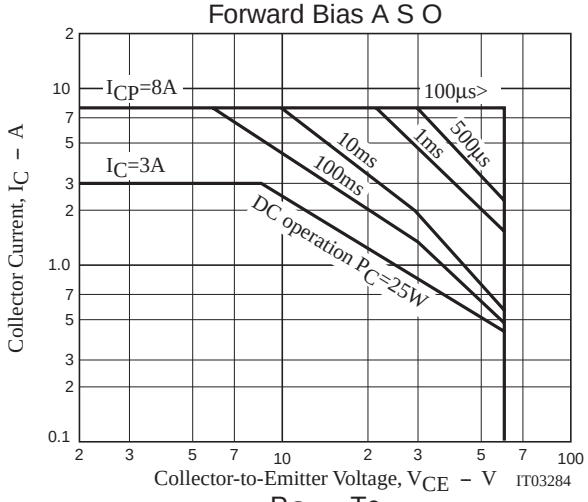




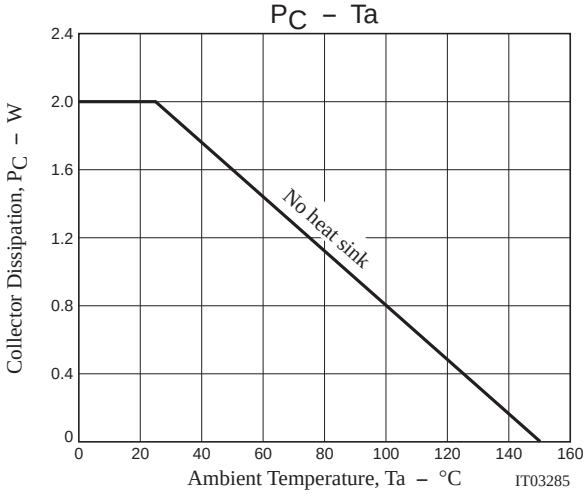




Forward Bias A S O



P_C – Ta



P_C – Tc