

**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.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		60	V
Collector-to-Emitter Voltage	V_{CEO}		60	V
Emitter-to-Base Voltage	V_{EB0}		6	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}		8	A
Collector Dissipation	P_C		2	W
		$T_c=25^\circ\text{C}$	25	W
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

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

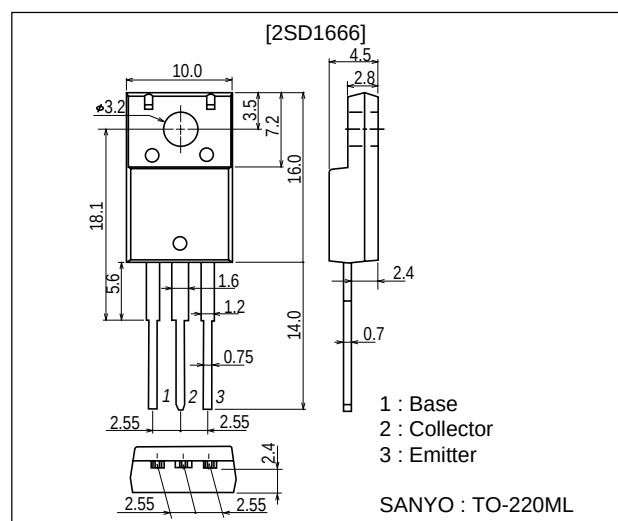
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=40\text{V}, I_E=0$			100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			100	μA

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Package Dimensions

unit : mm

2041A



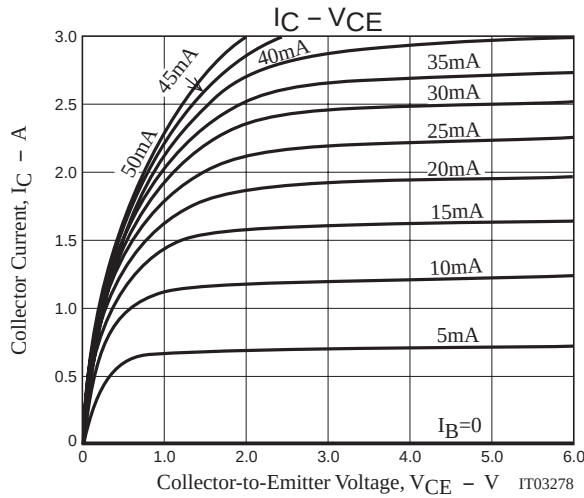
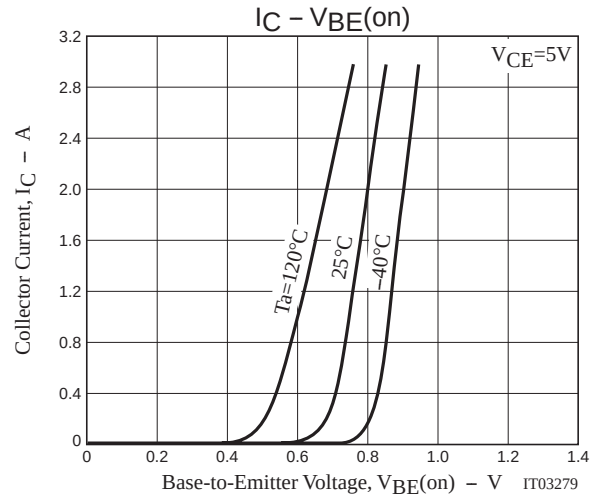
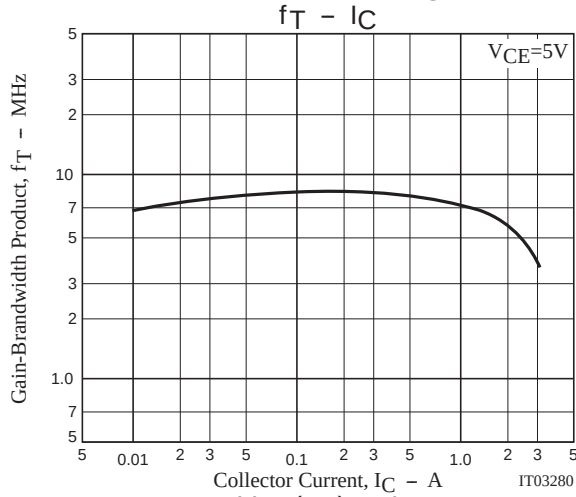
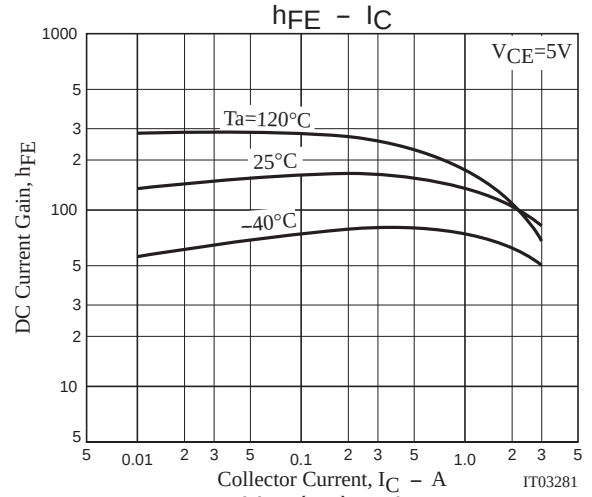
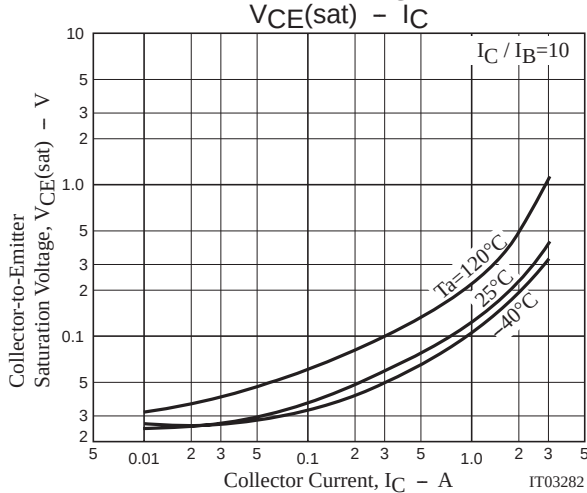
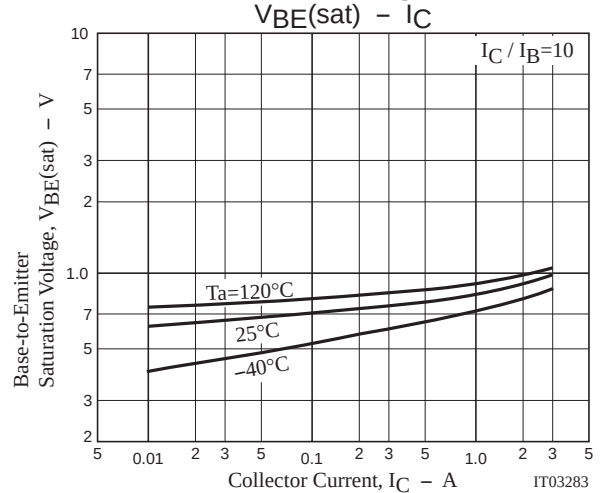
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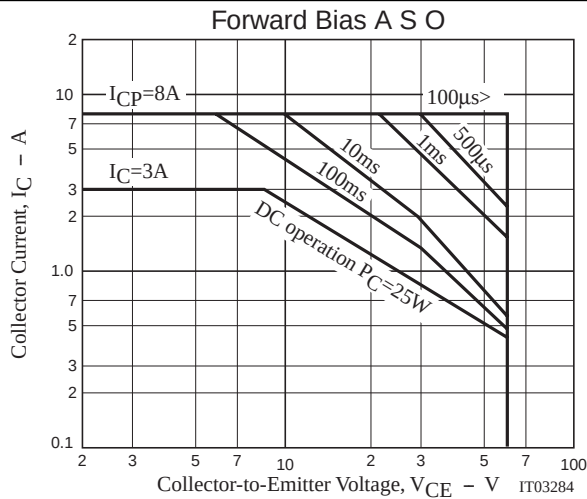
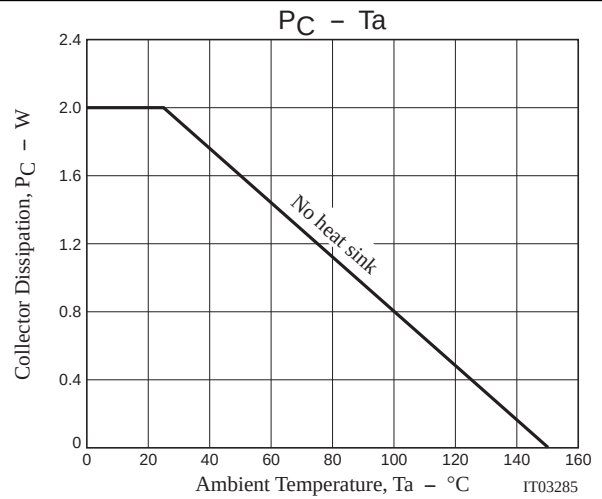
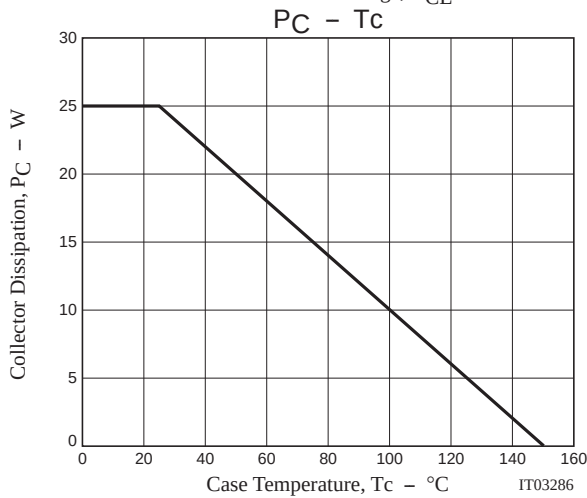
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE1}	$V_{CE}=5V, I_C=0.5A$	70*		280*	
	h_{FE2}	$V_{CE}=5V, I_C=3A$	20			
Gain-Bandwidth Product	f_T	$V_{CE}=5V, I_C=0.5A$		8		MHz
Output Capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$		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	$V_{(BR)CEO}$	$I_C=5mA, R_{BE}=\infty$	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





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