

FEATURES

High current (max. 1 A)

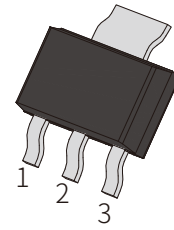
APPLICATIONS

Audio, telephony and automotive applications

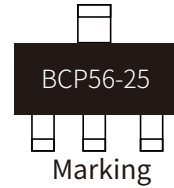
Thick and thin-film circuits

APPROVALS

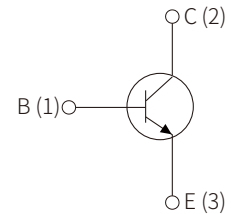
RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003



SOT-223



Marking



Schematic Symbol

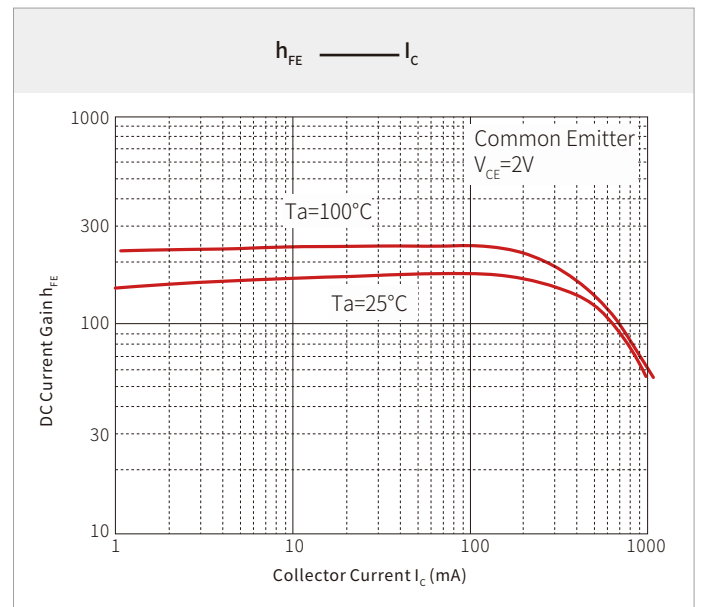
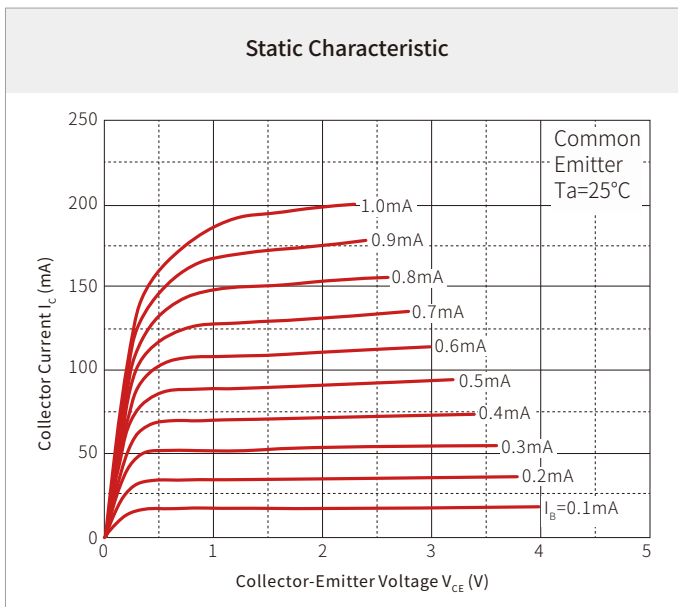
MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

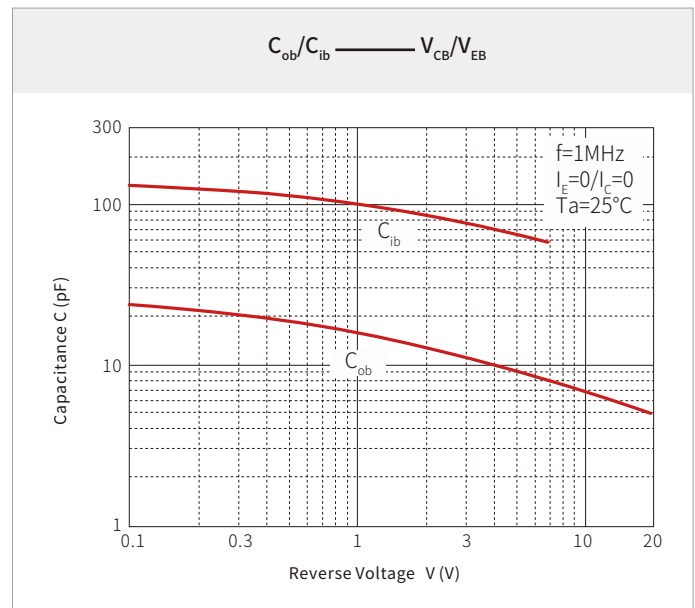
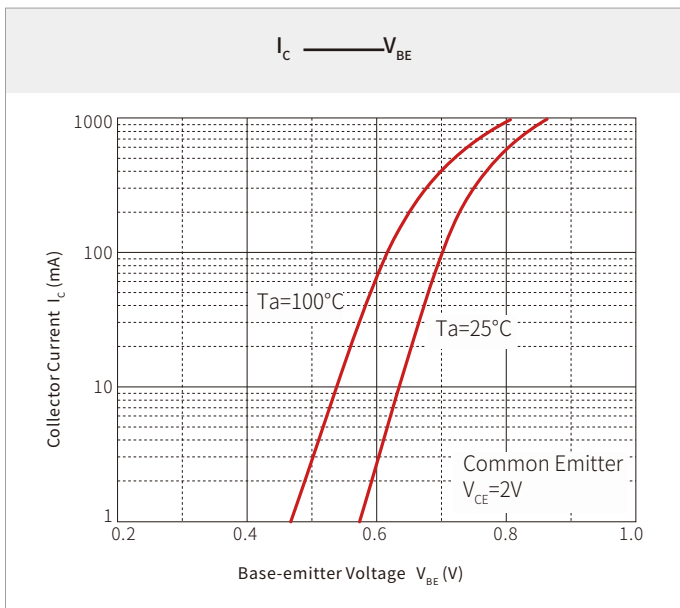
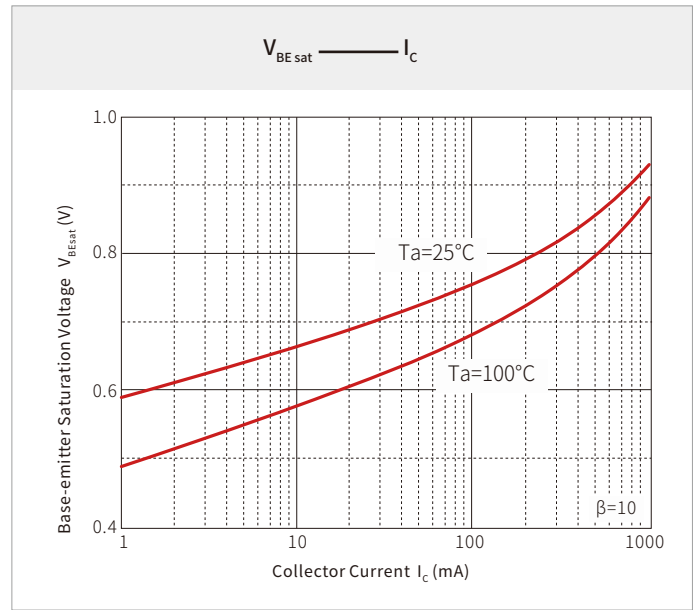
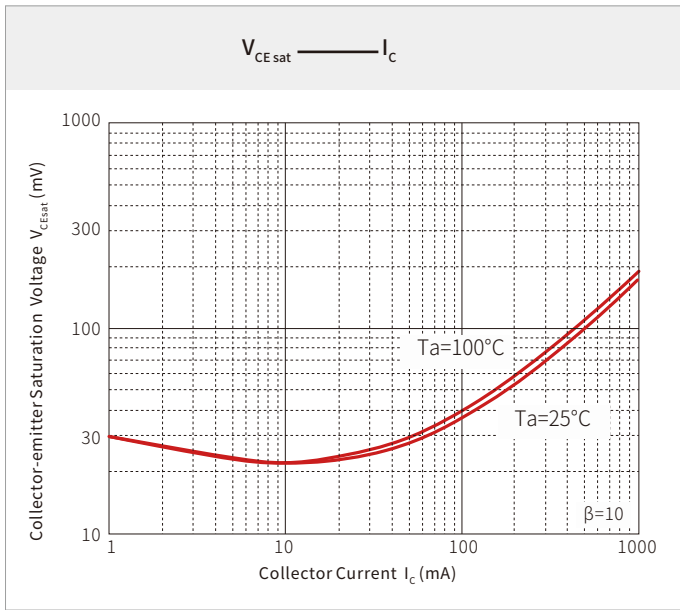
Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	100	V
Collector-Emitter Breakdown Voltage	V_{CEO}	80	
Emitter-Base Breakdown Voltage	V_{EBO}	5	
Collector Current	I_C	1	A
Base current	I_B	0.2	A
Collector Power Dissipation $T_a = 25^{\circ}\text{C}$	P_C	1.3	W
Junction Temperature	T_J	-55~+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

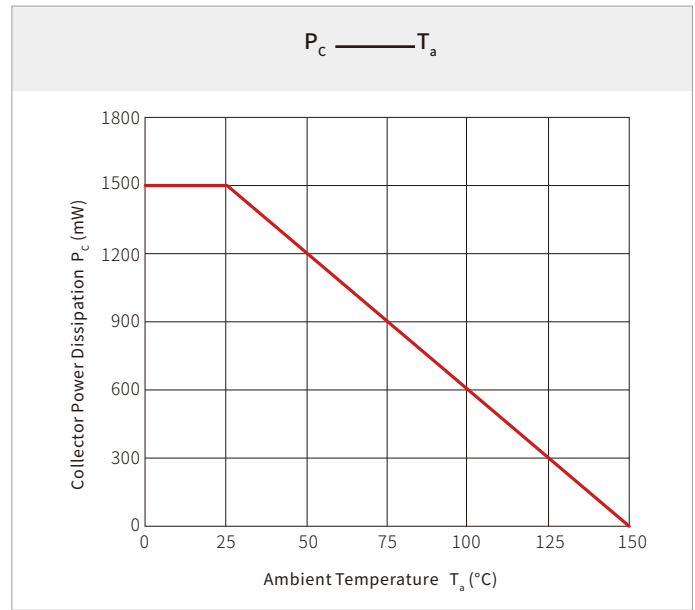
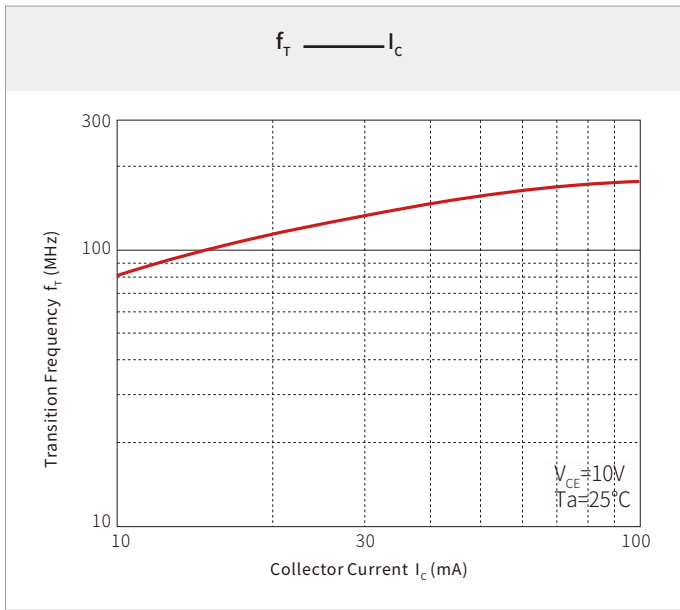
ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector Cutoff Current	I_{CBO}	$V_{\text{CB}} = 30\text{V}, I_{\text{E}} = 0$			100	nA
		$V_{\text{CB}} = 30\text{V}, I_{\text{E}} = 0, T_j = 25^{\circ}\text{C}$			10	μA
Emitter Cutoff Current	I_{EBO}	$V_{\text{EB}} = 5\text{V}, I_{\text{C}} = 0$			100	nA
DC Current Gain	h_{FE}	$V_{\text{CE}} = 2\text{V}, I_{\text{C}} = 5\text{mA}$	25			
		$V_{\text{CE}} = 2\text{V}, I_{\text{C}} = 150\text{mA}$	160		400	
		$V_{\text{CE}} = 2\text{V}, I_{\text{C}} = 500\text{mA}$	25			
Collector-Emitter Saturation Voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 500\text{mA}, I_{\text{B}} = 50\text{mA}$			0.5	V
Base-Emitter Saturation Voltage	V_{BE}	$V_{\text{CE}} = 2\text{V}, I_{\text{C}} = 500\text{mA}$			1	
Transition frequency	f_{T}	$V_{\text{CE}} = 5\text{V}, I_{\text{C}} = 10\text{mA}$		100		MHz

TYPICAL CHARACTERISTICS

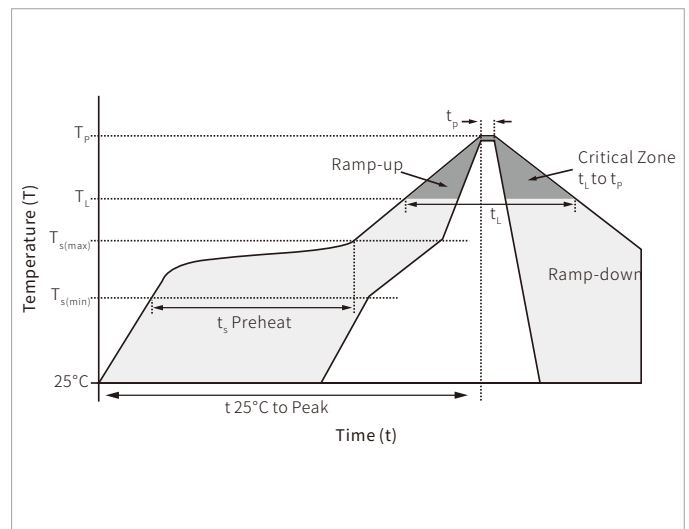




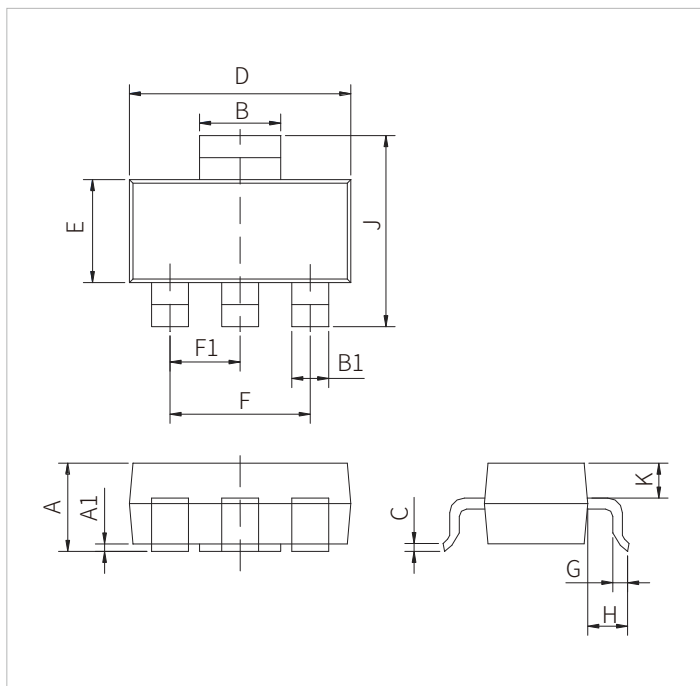


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C



SOT-223 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.50		1.80	0.059		0.071
A1	0.01		0.06	0.001		0.002
B	2.90		3.10	0.114		0.122
B1	0.60		0.80	0.024		0.031
C	0.22		0.32	0.009		0.013
D	6.30		6.70	0.248		0.264
E	3.30		3.70	0.130		0.146
F		4.60			0.181	
F1		2.30			0.091	
G	0.70		1.10	0.028		0.043
H	1.50		2.00	0.059		0.079
J	6.70		7.30	0.264		0.287
K		0.90			0.035	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BCP56-25	SOT-223	1000PCS	7"

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By QR Code

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