

DESCRIPTIONS

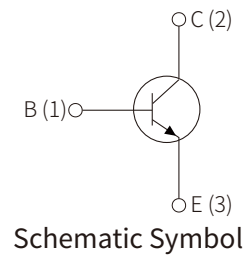
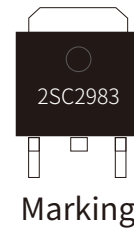
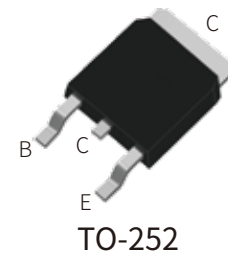
Silicon NPN Transistor In a TO-252 Plastic Package

APPLICATIONS

Low Frequency Power Amplifier

APPROVALS

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



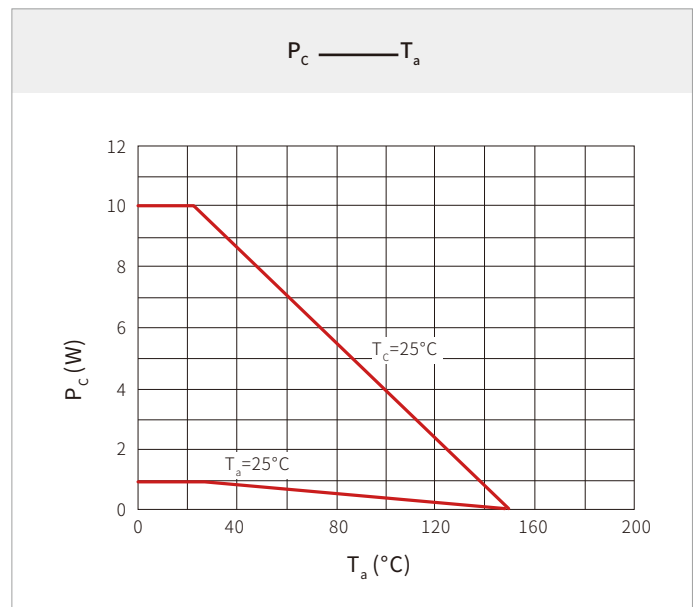
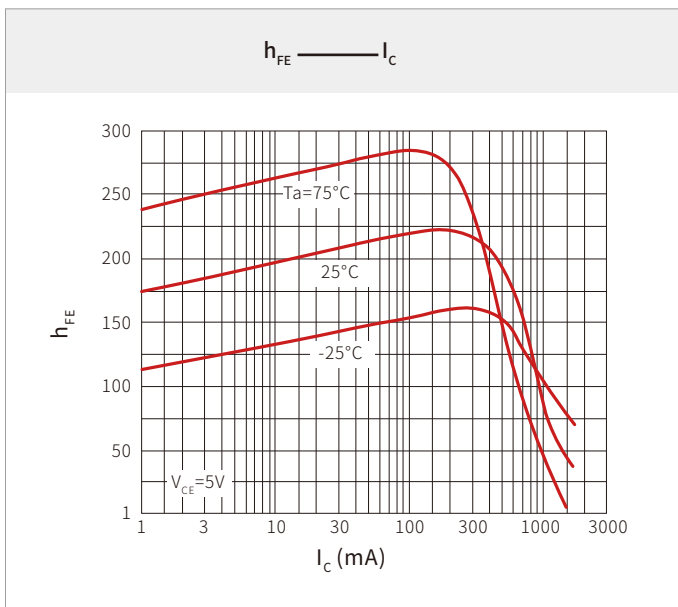
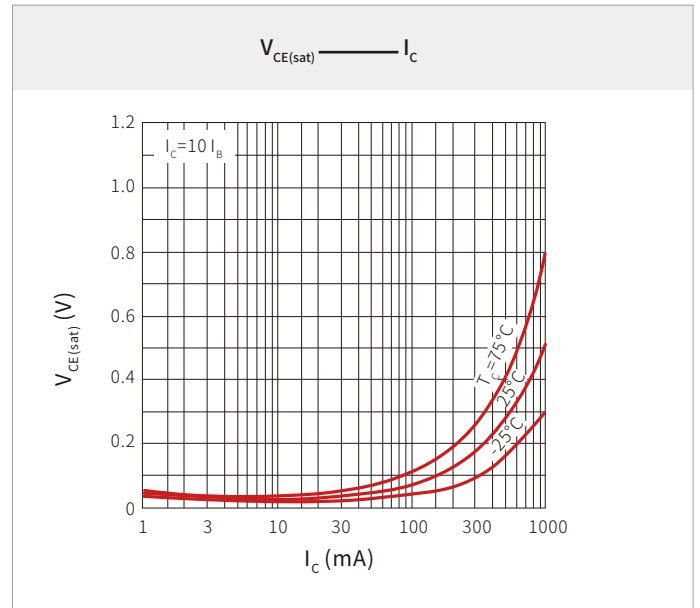
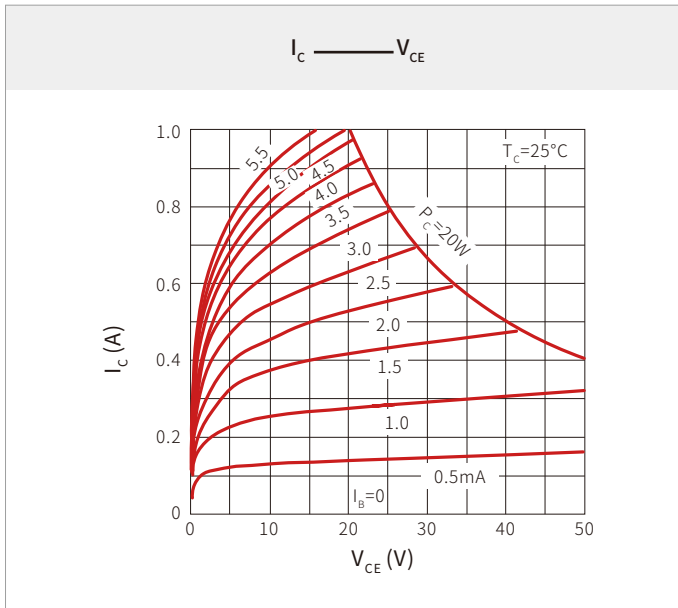
MAXIMUM RATINGS (T_A=25°C)

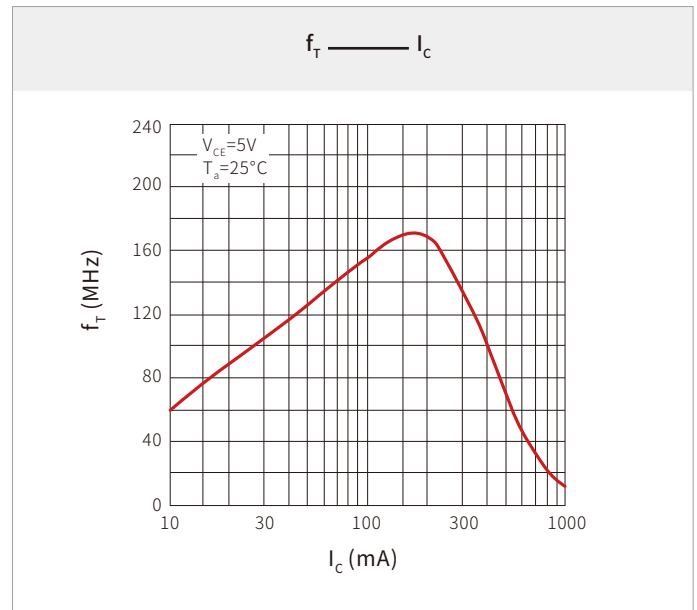
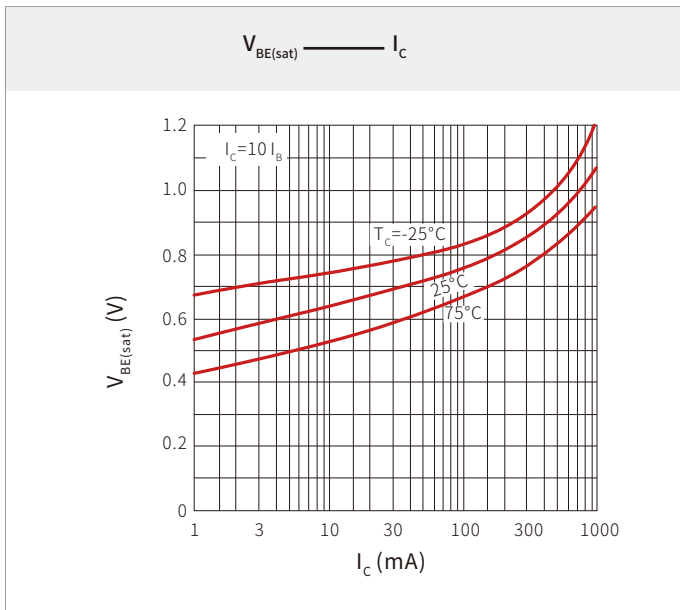
Parameter	Symbol	Value	Unit
Collector to Base Voltage	V _{CBO}	180	V
Collector to Emitter Voltage	V _{CEO}	160	
Emitter to Base Voltage	V _{EBO}	5.0	
Collector Current - Continuous	I _C	1.5	A
Collector Current – Continuous(Pulse)	I _{CP}	3.0	A
Collector Power Dissipation	P _C	1.0	W
Total Power Dissipation T _c =25°C	P _{tot}	1.25	W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector to Base Breakdown Voltage	V _{CBO}	I _C =1.0mA, I _E =0	180			V
Collector to Emitter Breakdown Voltage	V _{CEO}	I _C =10mA, I _B =0	160			
Emitter to Base Breakdown Voltage	V _{EBO}	I _E =1.0mA, I _C =0	5.0			
Collector Cut-Off Current	I _{CBO}	V _{CB} = 160V, I _E =0			10	μA
Emitter-Base Cut-Off Current	I _{EBO}	V _{EB} = 4V, I _C =0			10	
DC Current Gain	h _{FE}	V _{CE} =5.0V, I _C =150mA	60		200	
Base to Emitter Voltage	V _{BE}	V _{CE} =5.0V, I _C =500mA			1.0	V
Collector to Emitter Saturation Voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA			1.0	V
Transition Frequency	f _T	V _{CE} =5.0V, I _C =150mA, f=10MHz	10			MHz
Collector Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		25		pF

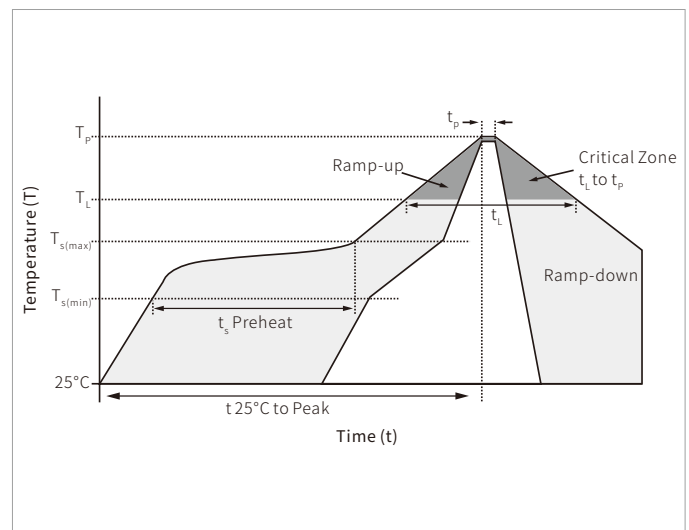
TYPICAL CHARACTERISTICS



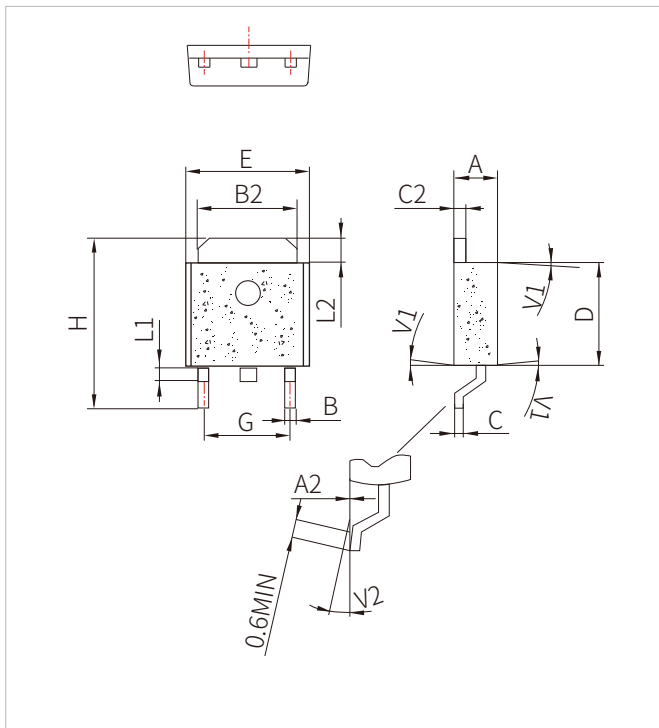


SOLDERING PARAMETERS

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



TO-252 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10		2.50	0.083		0.098
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.80	0.252		0.268
G	4.40		4.70	0.173	0.1	0.185
H	9.35		10.7	0.368		0.421
L1	1.30		1.70	0.051	0.143	0.067
L2	1.37		1.50	0.054		0.059
V1		4°			0.130	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
2SC2983	TO-252	2500PCS	13"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

To find your local partner within Semiware's global website: www.semiware.com

© 2022 Semiware Semiconductor Inc.

The content of this document has been carefully checked and understood. However, neither Semiware nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiware does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiware. Latest publications and a complete disclaimer can be downloaded from the Semiware website. All trademarks recognized.