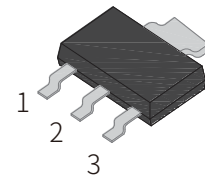


FEATURES

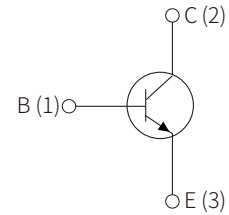
- | High Breakdown Voltage and Current
- | Excellent DC Current Gain Linearity
- | Complement the 2SB1260
- | Low Collector-Emitter Saturation Voltage



SOT-89

MECHANICAL DATA

- | SOT-89 small outline plastic package
- | Epoxy UL: 94V-0
- | Mounting position: Any



Schematic Symbol

APPROVALS

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

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	
Emitter-Base Voltage	V_{EBO}	5	
Collector Current	I_C	1	A
Collector Power Dissipation	P_C	500	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	250	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

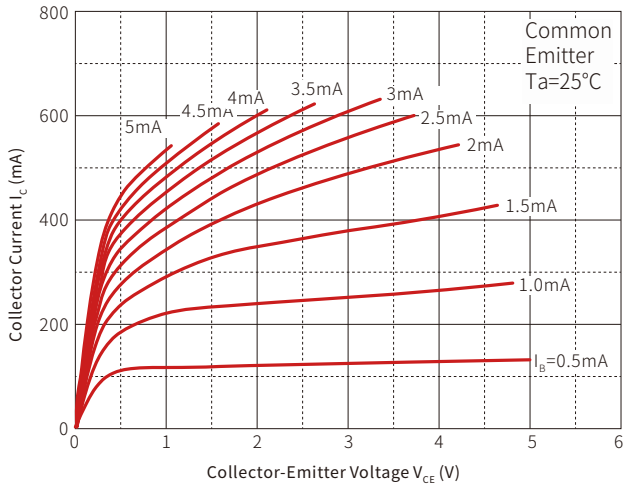
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =50μA, I _E =0	100			V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	80			
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =50μA, I _C =0	5			
Collector cut-off current	I _{CBO}	V _{CB} =80V, I _E =0			1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			1	
DC Current Gain	h _{FE}	V _{CE} =3V, I _C =1mA	82		390	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =20mA			0.4	V
Transition frequency	f _T	V _{CE} =10V, I _C =50mA, f=100MHz		100		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		20		pF

CLASSIFICATION OF H_{FE(2)}

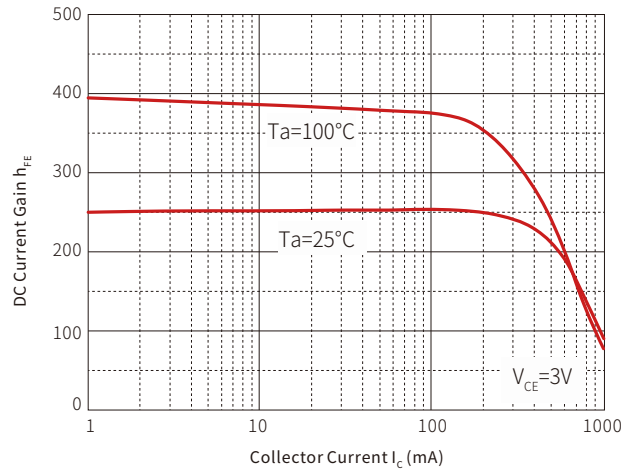
Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	DF		

TYPICAL CHARACTERISTICS

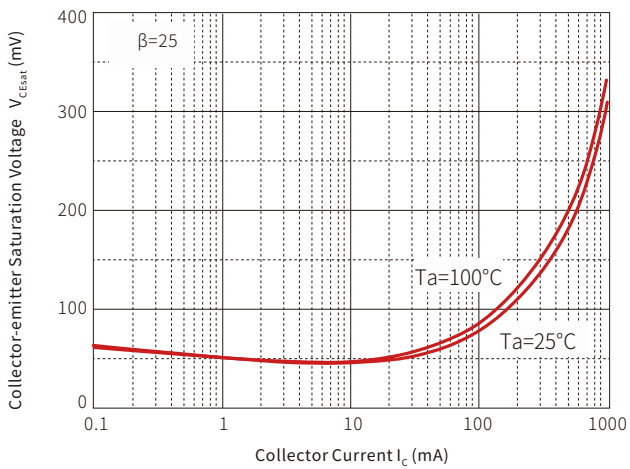
Static Characteristic



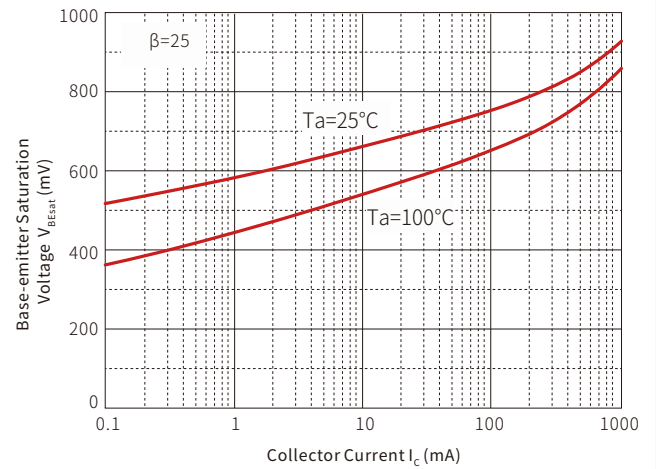
$h_{FE} \text{ — } I_C$

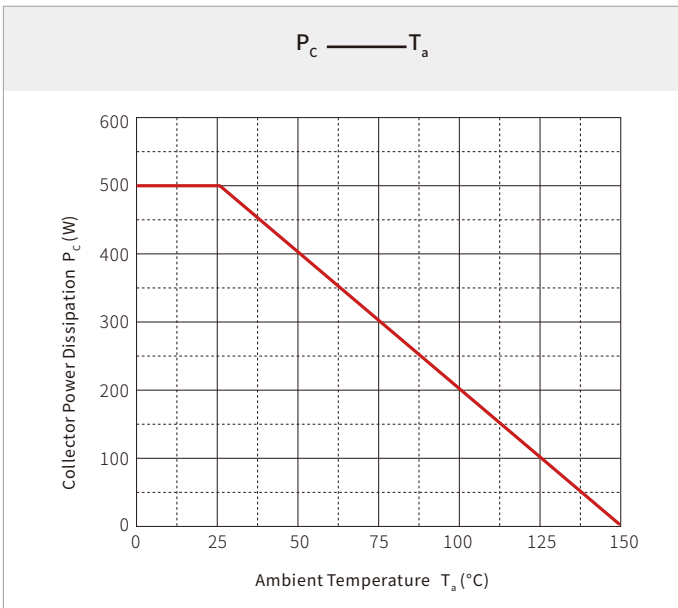
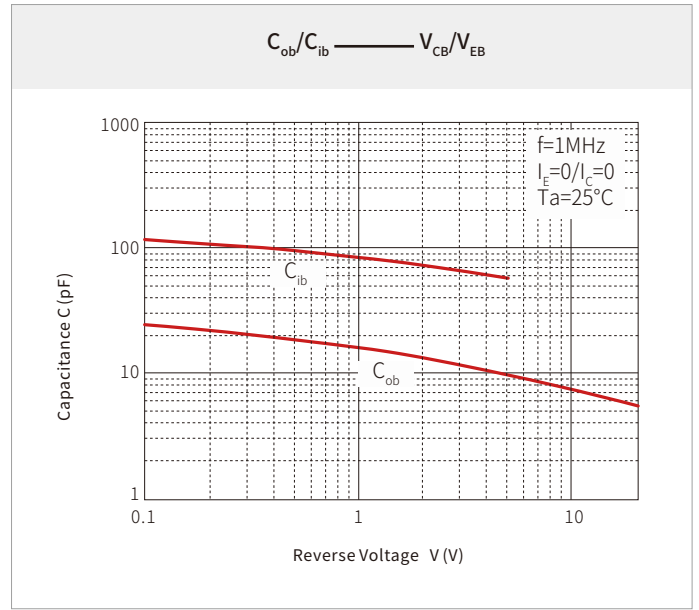
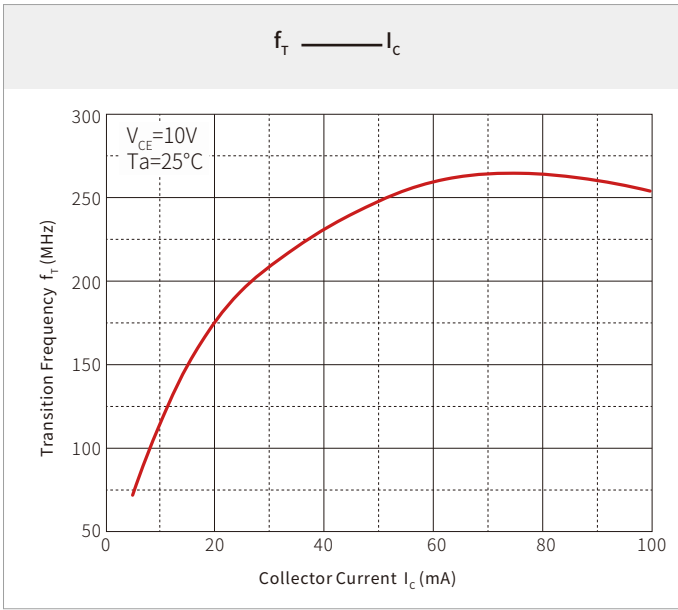


$V_{CEsat} \text{ — } I_C$



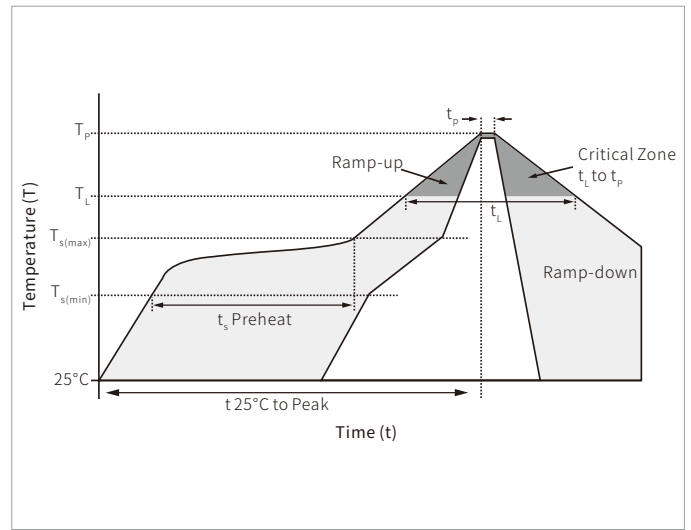
$V_{BEsat} \text{ — } I_C$



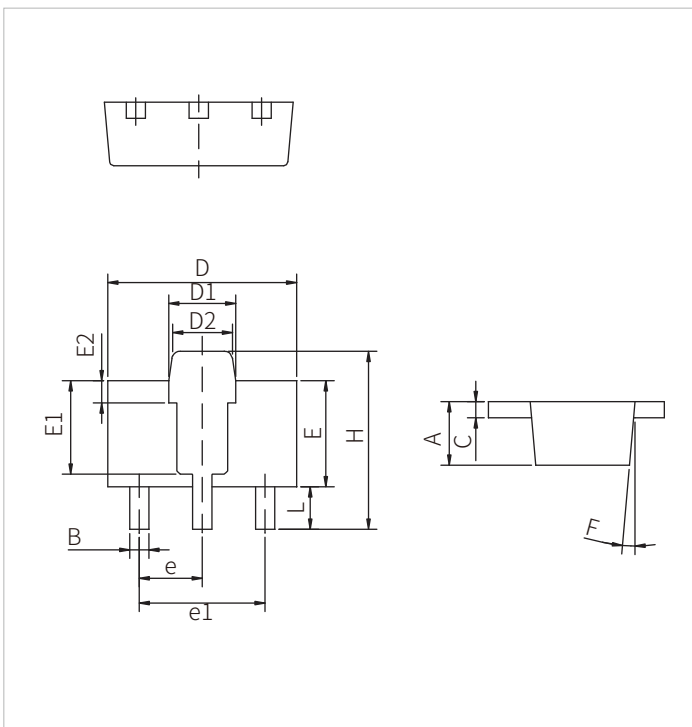


SOLDERING PARAMETERS

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-89 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.40		1.60	0.055		0.063
B	0.40		0.52	0.016		0.020
C	0.35		0.41	0.014		0.016
D	4.40		4.60	0.173		0.181
D1	1.50		1.70	0.059		0.067
D2	1.30		1.50	0.051		0.059
E	2.40		2.60	0.094		0.102
E1		2.20			0.087	
E2		0.52			0.020	
e		1.50			0.059	
e1		3.00			0.118	
F		5.00			5.000	
H	4.05		4.25	0.159		0.167
L	0.89		1.20	0.035		0.047

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size	Box	Carton
2SD1898	SOT-89	1000PCS	7"	6000PCS	30000PCS

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By QR Code

Website



Wechat

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

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