

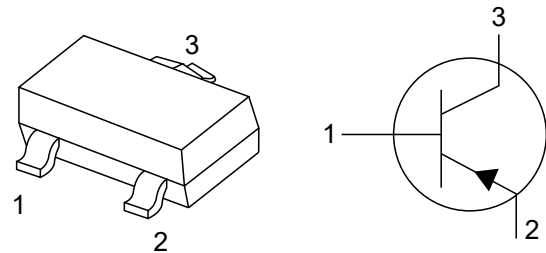
1.Features

- High voltage and high current
- Excellent hFE Linearity
- Complementary to C1815
- 2SA1015 TRANSISTOR (PNP)

2.Pinning Information

Pin	Symbol	Description
1	B	BASE
2	E	EMITTER
3	C	COLLECTOR

SOT-23



3.Absolute Maximum Ratings $T_A = 25^{\circ}\text{C}$

Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-150	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$



4. Electrical Characteristics $T_A = 25^\circ\text{C}$

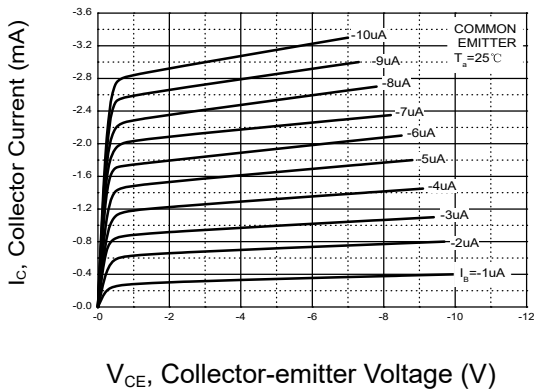
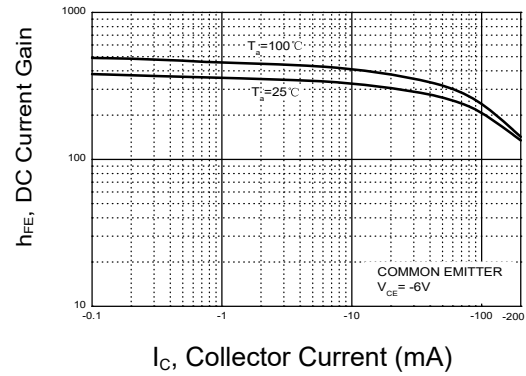
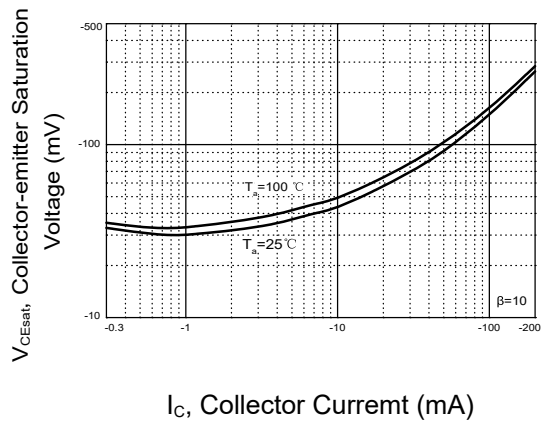
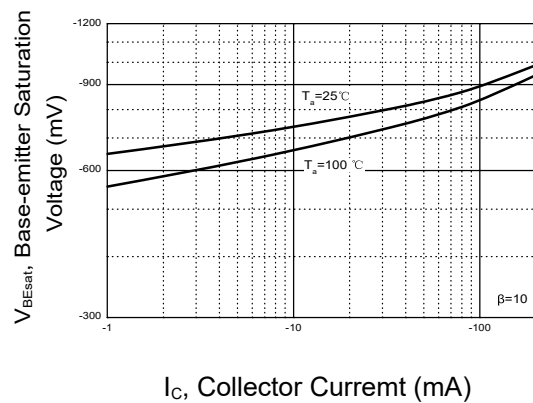
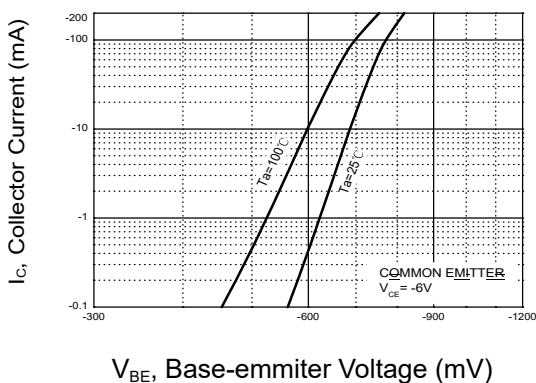
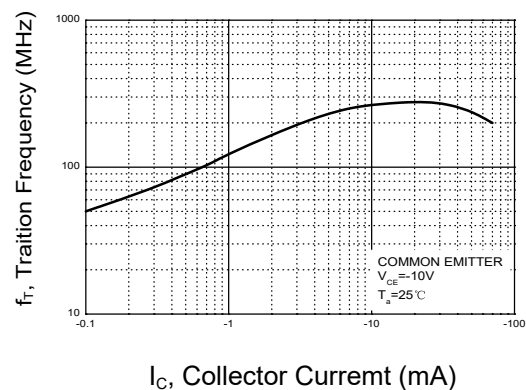
Parameter	Symbol	Conditions	Min	Typ	Max	Units
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -0.1\text{mA}$, $I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$, $I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50\text{V}$, $I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CB} = -50\text{V}$, $I_E = 0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6\text{V}$, $I_C = -2\text{mA}$	130		400	
		$V_{CE} = -6\text{V}$, $I_C = -0.2\text{mA}$	70			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$			-1.1	V
Transition frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -1\text{mA}$, $f = 30\text{MHz}$	80			MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			7	pf
Noise Figure	N_F	$V_{CE} = -6\text{V}$, $I_C = -0.1\text{mA}$ $R_g = 10\text{k}\Omega$, $f = 1\text{kHz}$			6	dB

5. Classification of h_{FE}

Rank	L	H
Range	130-200	200-400

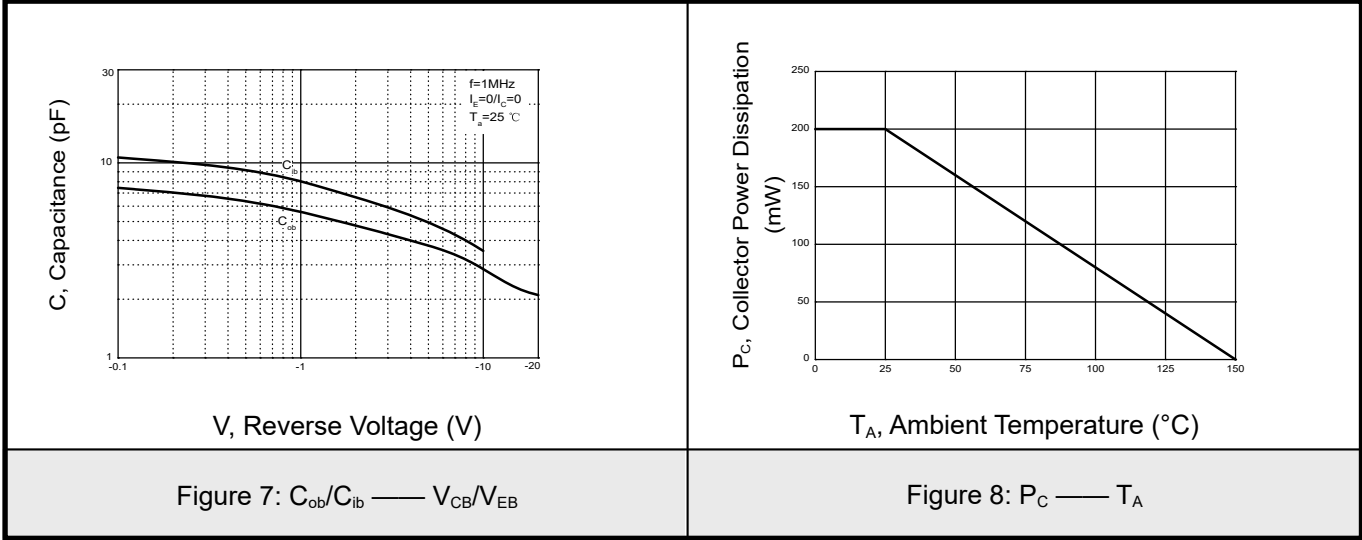


6.1 Typical Characteristics

Figure 1: I_C — V_{CE} Figure 2: h_{FE} — I_C Figure 3: V_{CEsat} — I_C Figure 4: V_{BEsat} — I_C Figure 5: I_C — V_{BE} Figure 6: f_T — I_C

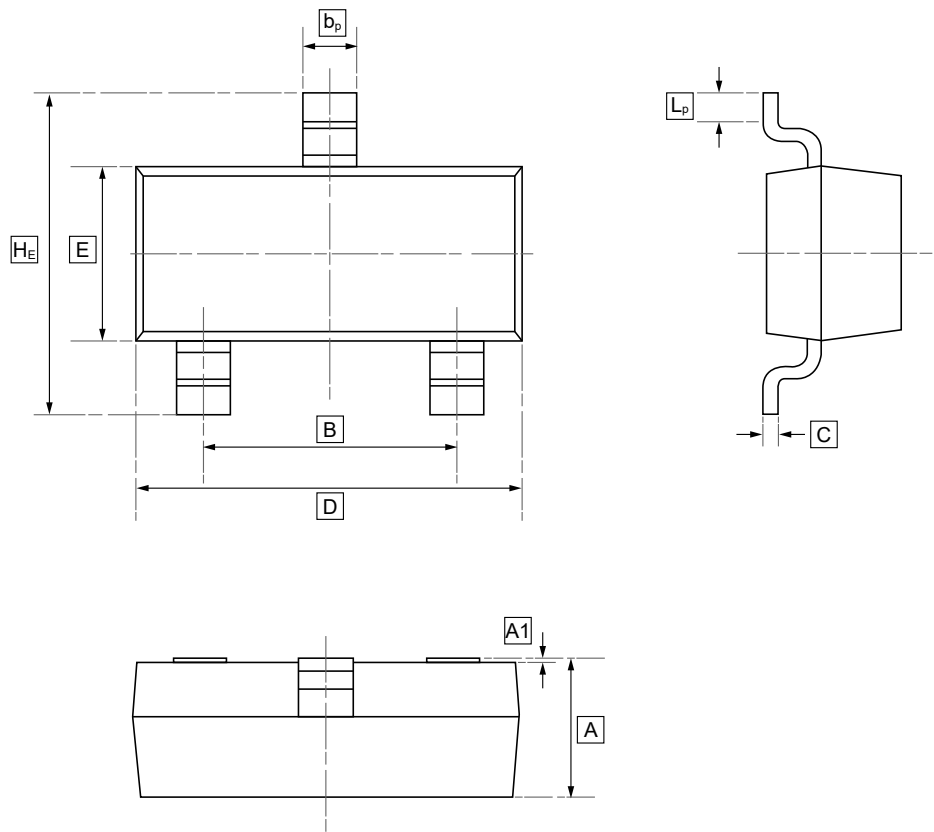


6.2Typical Characterisitics





7.SOT-23 Package Outline Dimensions

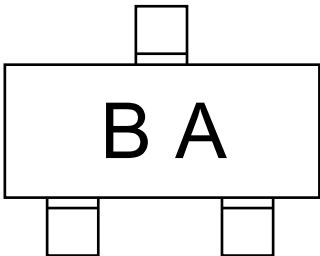


DIMENSIONS (mm are the original dimensions)

Symbol	A	B	b _p	C	D	E	H _E	A1	L _p
Min	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20
Max	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50



8.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW 2SA1015	SOT-23	3000	Tape and reel



9.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

When applying our products, please do not exceed the maximum rated values, as this may affect the reliability of the entire system. Under certain conditions, any semiconductor product may experience faults or failures. Buyers are responsible for adhering to safety standards and implementing safety measures during system design, prototyping, and manufacturing when using our products to prevent potential failure risks that could lead to personal injury or property damage.

Unless explicitly stated in writing, UMW products are not intended for use in medical, life-saving, or life-sustaining applications, nor for any other applications where product failure could result in personal injury or death. If customers use or sell the product for such applications without explicit authorization, they assume all associated risks.

When reselling, applying, or exporting, please comply with export control laws and regulations of China, the United States, the United Kingdom, the European Union, and other relevant countries, regions, and international organizations.

This document and any actions by UMW do not grant any intellectual property rights, whether express or implied, by estoppel or otherwise. The product names and marks mentioned herein may be trademarks of their respective owners.