UMW 2SC2712

SOT-23 Plastic-Encapsulate Transistors

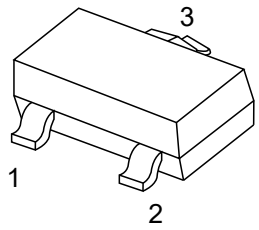
1.Features

- Audio Frequency General Purpose Amplifier Applications
- 2SC2712 TRANSISTOR (NPN)
- Low Noise: NF=1dB (Typ), 10dB(MAX)
- Complementary to 2SA1162

2.Pinning Information

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

SOT-23



3.Absolute Maximum Ratings T_A= 25°C

Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	150	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to 150	°C

4.Electrical Characteristics T_A= 25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=6V, I_C=2mA	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA		0.1	0.25	V
Transition frequency	f_T	V_{CE}=10V, I_C=1mA	80			MHz
Output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		2	3.5	pf
Noise Figure	N_F	V_{CE}=6V, I_C=0.1mA R_g=10kΩ, f=1kHz		1	10	dB

5.Classification of h_{FE}

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL

6.1Typical Characterisitics

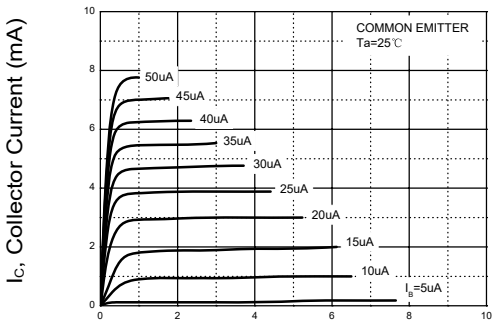


Figure 1: Static Characteristic

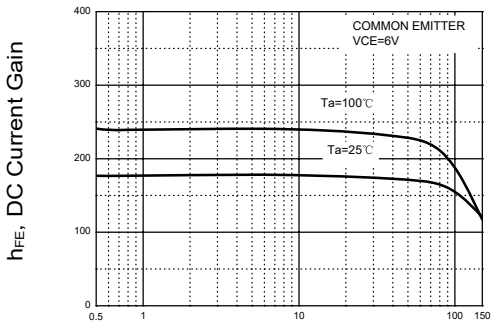


Figure 2: h_{FE} —— I_C

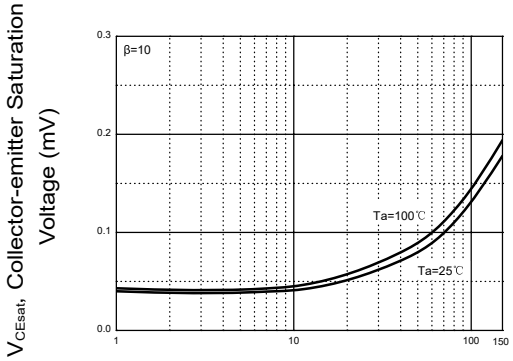


Figure 3: V_{CEsat} —— I_C

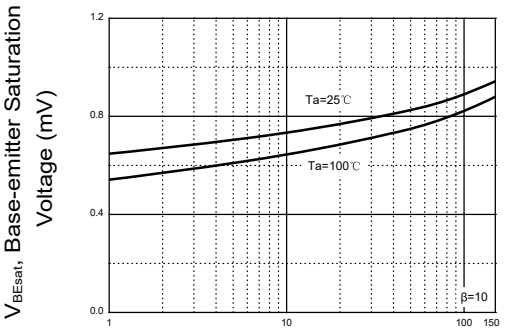


Figure 4: V_{BEsat} —— I_C

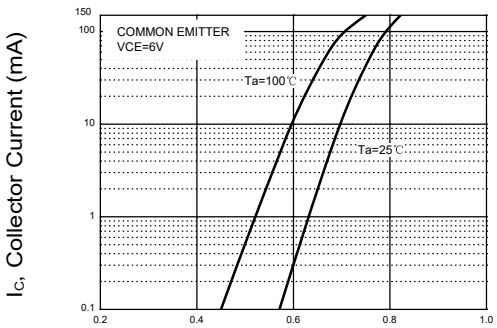


Figure 5: I_C —— V_{BE}

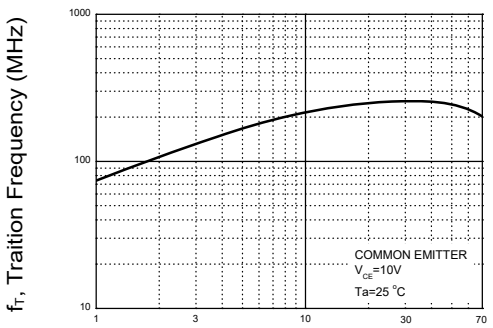


Figure 6: f_T —— I_C

6.2Typical Characterisitics

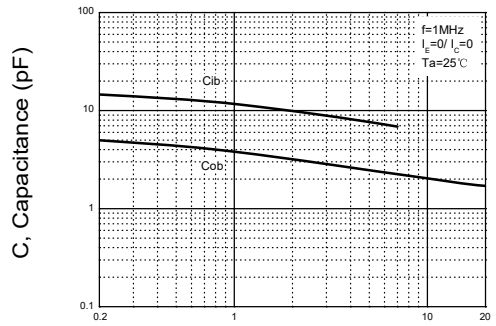


Figure 7: C_{ob}/C_{ib} —— V_{CB}/V_{EB}

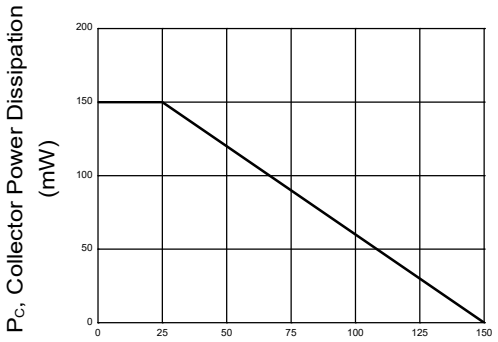
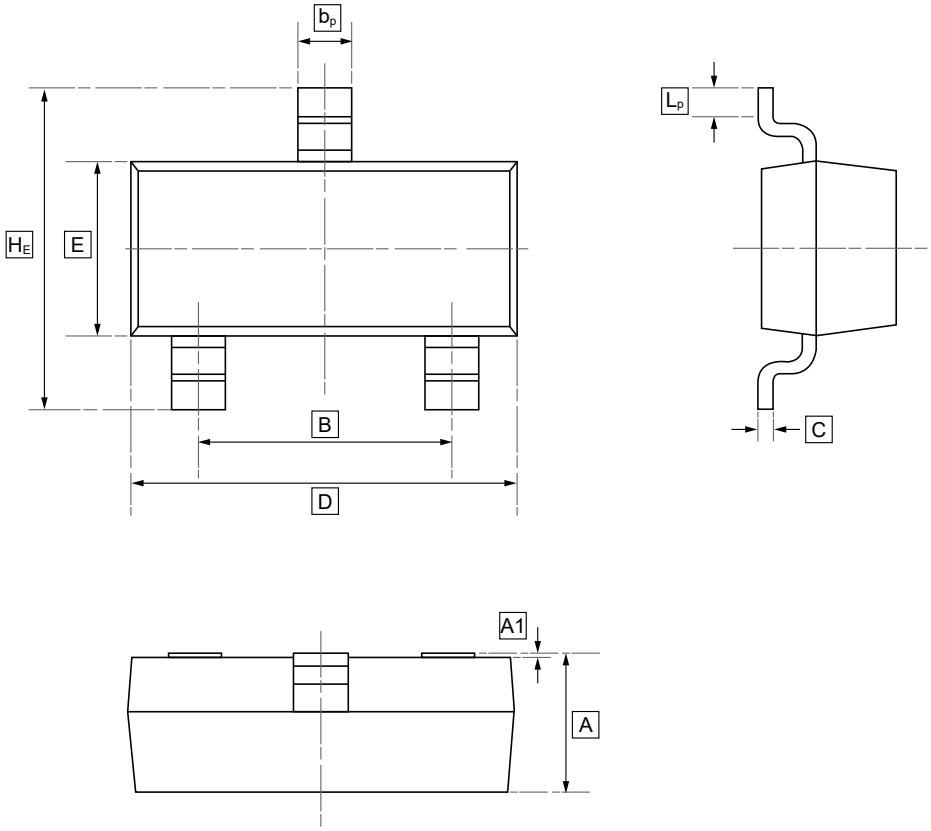


Figure 8: P_C —— T_A

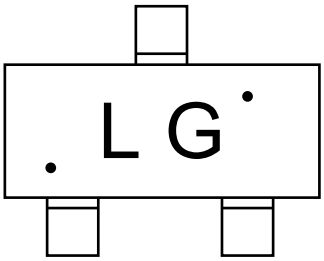
7.SOT-23 Package Outline Dimensions



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 2SC2712	SOT-23	3000	Tape and reel

9.Disclaimer

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