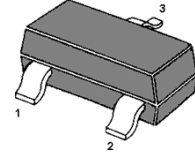


SOT-23 Plastic-Encapsulate Transistors

MMBTSC2715 TRANSISTOR(NPN)

FEATURES

- High Power Gain
- Recommended for FM IF, OSC Stage and AM CONV. IF Stage.



1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^{\circ}\text{C/W}$
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

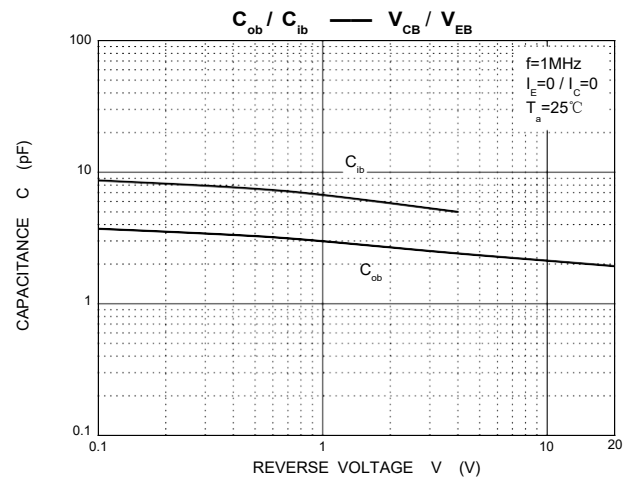
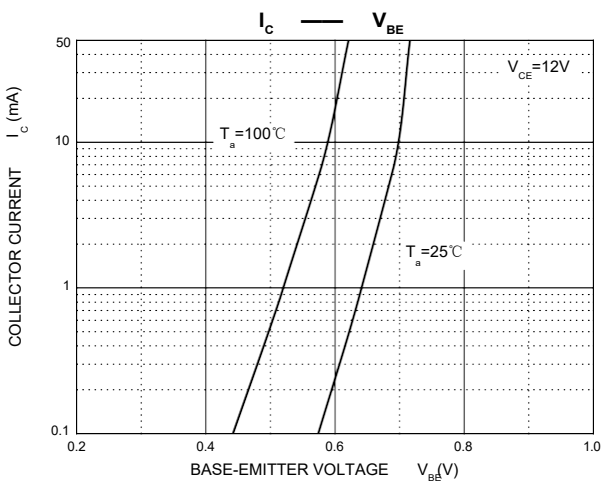
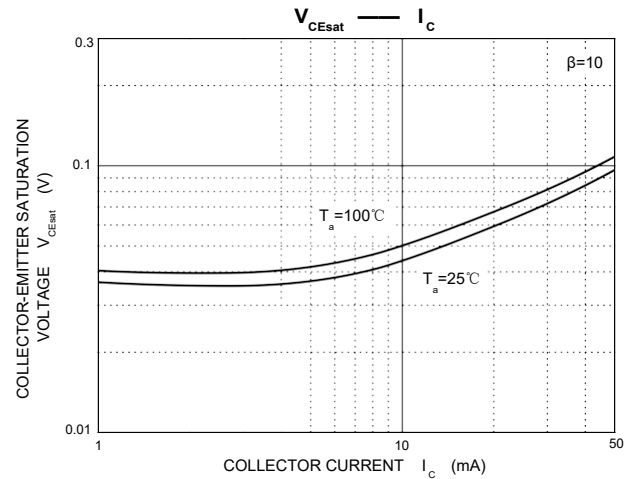
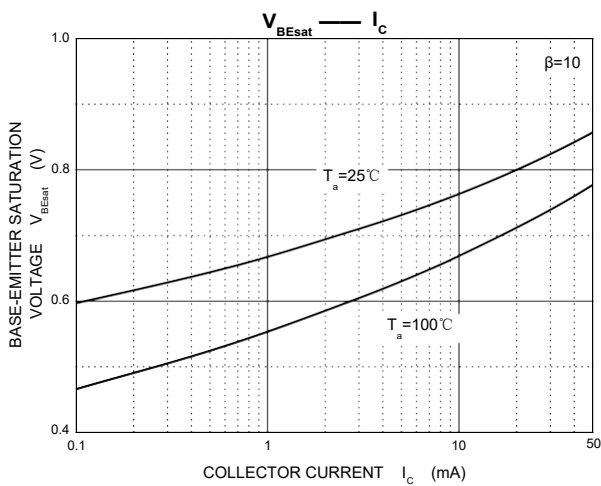
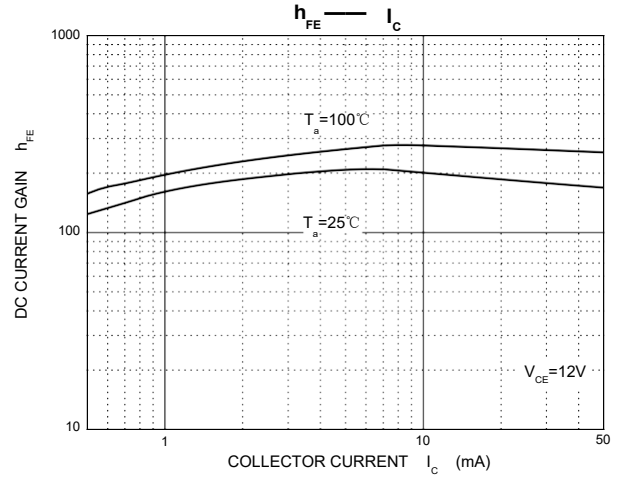
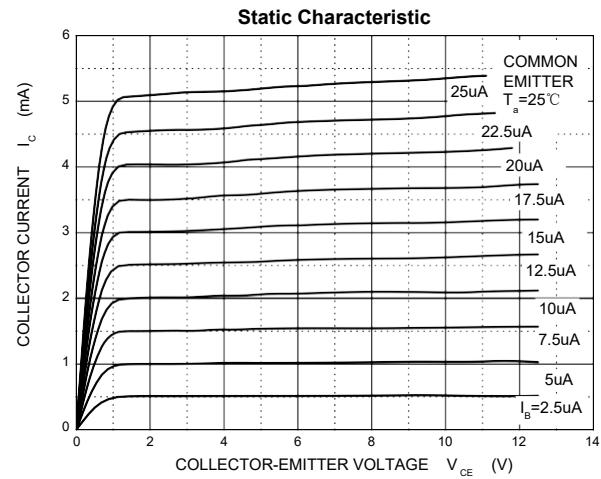
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}$, $I_E=0$	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}$, $I_C=0$	4			V
Collector cut-off current	I_{CBO}	$V_{CB}=35\text{V}$, $I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}$, $I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=12\text{V}$, $I_C=2\text{mA}$	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}$, $I_B=1\text{mA}$			0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10\text{mA}$, $I_B=1\text{mA}$			1	V
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$			3.2	pF
Transition frequency	f_T	$V_{CE}=10\text{V}$, $I_C=1\text{mA}$	100		400	MHz
Power Gain	G_{pe}	$V_{CE}=6\text{V}$, $I_C=1\text{mA}$, $f=10.7\text{MHz}$	27		3	dB

CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y
Range	40-80	70-140	120-240
Marking	RR1	RO1	RY1

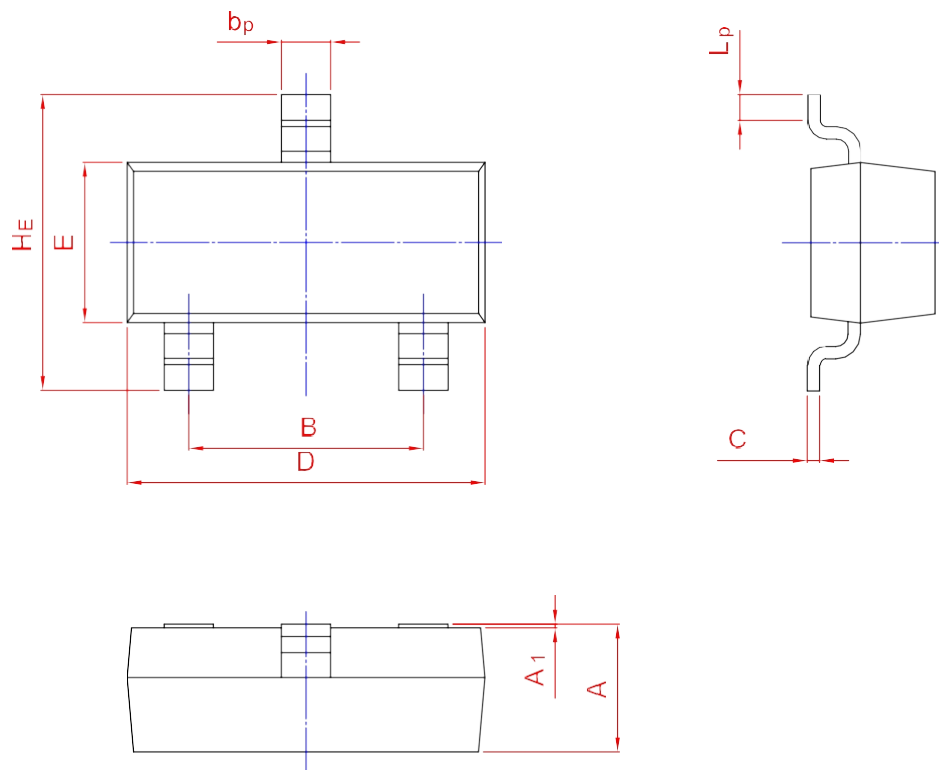
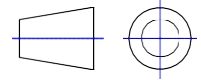
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20