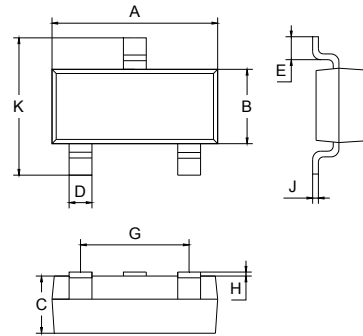


- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

## FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available (MMBT5551).
- Also available in lead free version.



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

## APPLICATIONS

- Ideal for medium power amplification and switching

## ORDERING INFORMATION

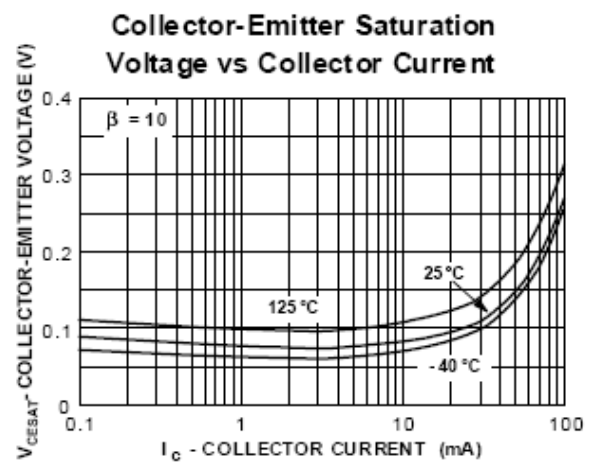
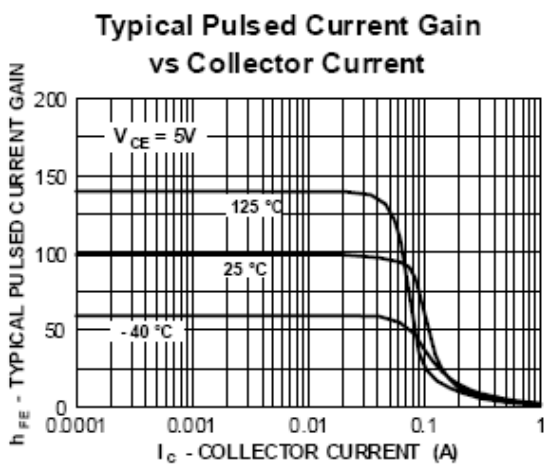
Type No.	Marking	Package Code
MMBT5401	2L	SOT-23

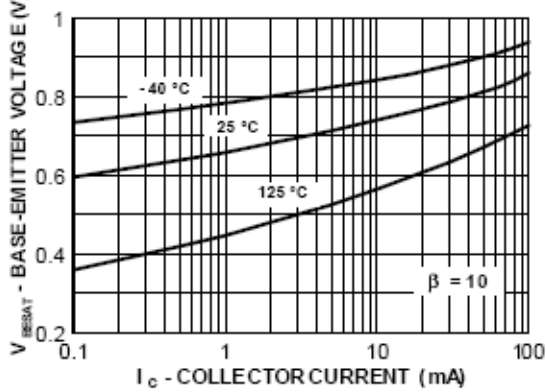
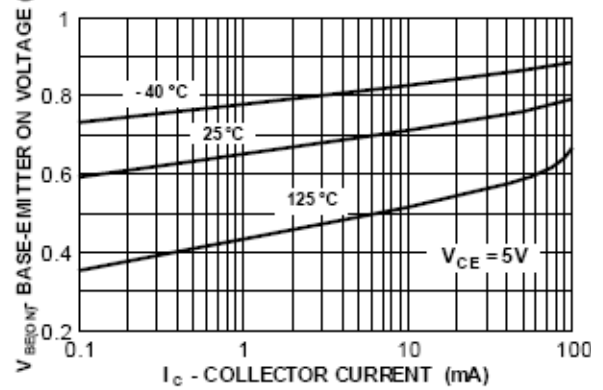
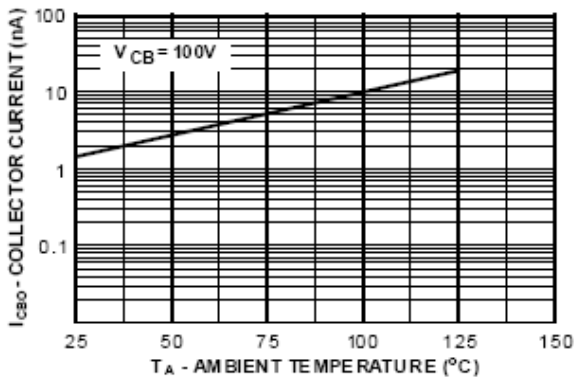
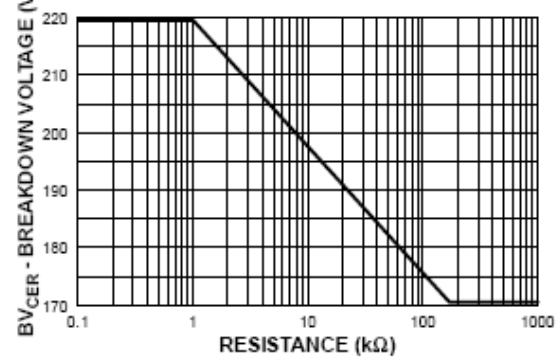
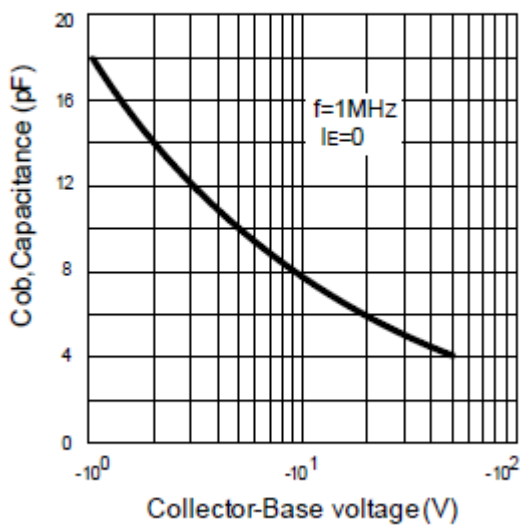
## MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT
$V_{CBO}$	collector-base voltage	-160	V
$V_{CEO}$	collector-emitter voltage	-150	V
$V_{EBO}$	emitter-base voltage	-5	V
$I_C$	collector current (DC)	-0.6	A
$P_D$	Total device dissipation	0.35	W
$R_{\theta JC}$	Thermal resistance, junction to ambient	357	°C/W
$T_j, T_{stg}$	junction and storage temperature	-55 to +150	°C


**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-160		
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-150		
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -10\mu A, I_C = 0$	-5		
$I_{CBO}$	collector cut-off current	$I_E = 0; V_{CB} = -120V$	-	-50	nA
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = -3V$	-	-50	nA
$h_{FE}$	DC current gain	$V_{CE} = -5V; I_C = -1mA$ $V_{CE} = -5V; I_C = -10mA$ $V_{CE} = -5V; I_C = -50mA$	50 100 50	- 300 -	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = -10mA; I_B = -1mA$ $I_C = -50mA; I_B = -5mA$	-	-0.2 -0.5	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = -10mA; I_B = -1mA$ $I_C = -50mA; I_B = -5mA$	-	-1 -1	V
$f_T$	transition frequency	$I_C = -10mA; V_{CE} = -10V;$ $f = 100MHz$	100	300	MHz
$C_{obo}$	Output capacitance	$I_E = 0; V_{CB} = -10V,$ $f = 1.0MHz$		6.0	pF

**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**



**Base-Emitter Saturation Voltage vs Collector Current**

**Base-Emitter ON Voltage vs Collector Current**

**Collector-Cutoff Current vs Ambient Temperature**

**Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base**

**Collector output Capacitance**


Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT-23	3000pcs	7inch	45,000pcs	203×203×195	180,000pcs	438×438×220