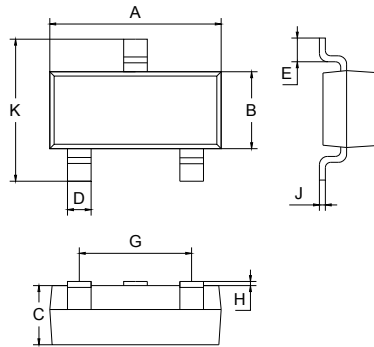


## FEATURES

- Epitaxial planar die construction.
- Ultra-small surface mount package.

## APPLICATIONS

- Use as a medium power amplifier.



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		

## ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT2369	M1J	SOT-23

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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	15	V
$V_{EBO}$	Emitter-Base Voltage	4.5	V
$I_C$	Collector Current -Continuous	200	mA
$P_C$	Collector Dissipation	300	mW
$R_{\theta JA}$	Thermal resistance, junction to ambient	417	°C/W
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	°C



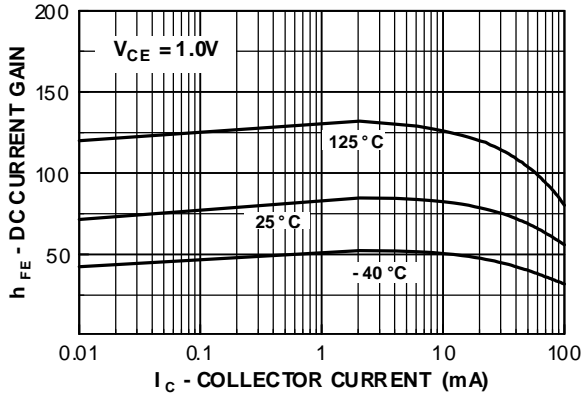
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	15		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	4.5		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20V, I_E=0$		0.4	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=1.0V, I_C=10mA$	40	120	
		$V_{CE}=2.0V, I_C=100mA$	20		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1.0mA$		0.25	V
Output capacitance	$C_{obo}$	$V_{CE}=5.0V, I_E=0, f=1.0MHz$		4.0	pF
Small signal current gain	$h_{fe}$	$I_C=10mA, V_{CE}=10V, f=100MHz$	5.0		
Storage Time	$t_s$	$I_{B1}=I_{B2}=I_C=10mA$		13	ns
Turn-on time	$t_{on}$	$V_{CC}=3V, I_C=10mA, I_{B1}=3mA$		12	ns
Turn-off time	$t_{off}$	$V_{CC}=3V, I_C=10mA, I_{B1}=3mA, I_{B2}=1.5mA$		18	ns

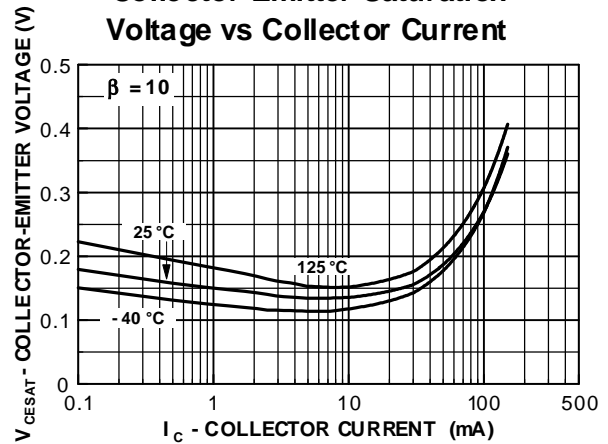


TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

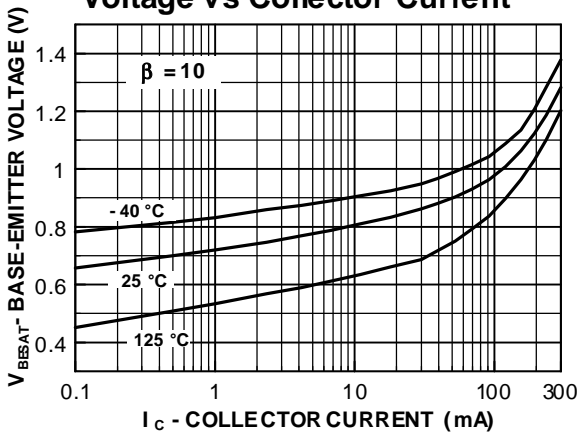
**DC Current Gain vs Collector Current**



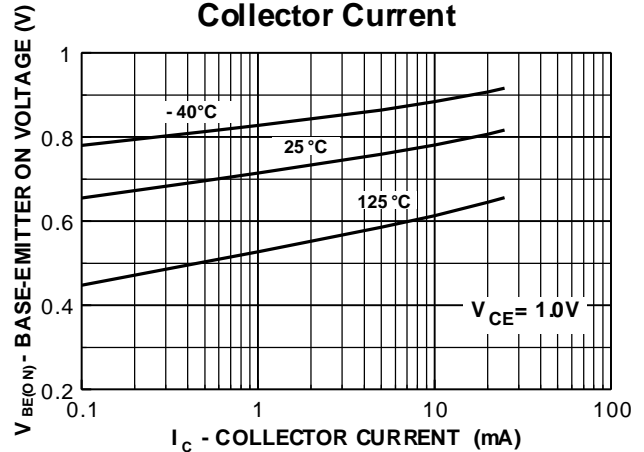
**Collector-Emitter Saturation Voltage vs Collector Current**



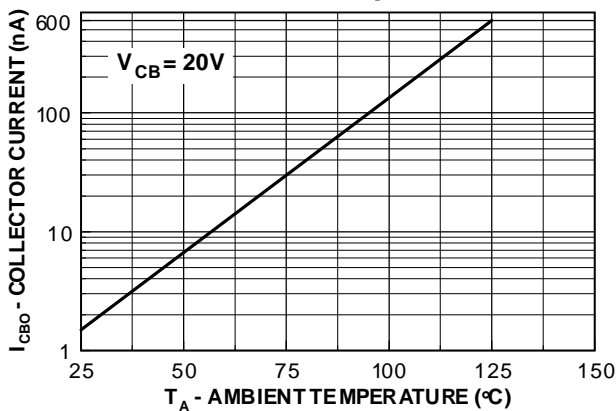
**Base-Emitter Saturation Voltage vs Collector Current**



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



**Collector-Cutoff Current vs Ambient Temperature**



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