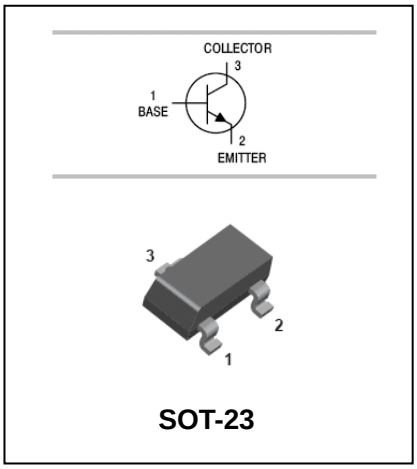
NPN General Purpose Amplifier MMBT2369

FEATURES

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

Lead-free



SOT-23

APPLICATIONS

- Use as a medium power amplifier.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT2369	M1J	SOT-23

MAXIMUM RATING @ Ta=25℃ 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	℃/W
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA 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=10μA I_C=0	4.5		V
Collector cut-off current	I_{CBO}	V_{CB}=20V I_E=0		0.4	μA
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℃ unless otherwise specified

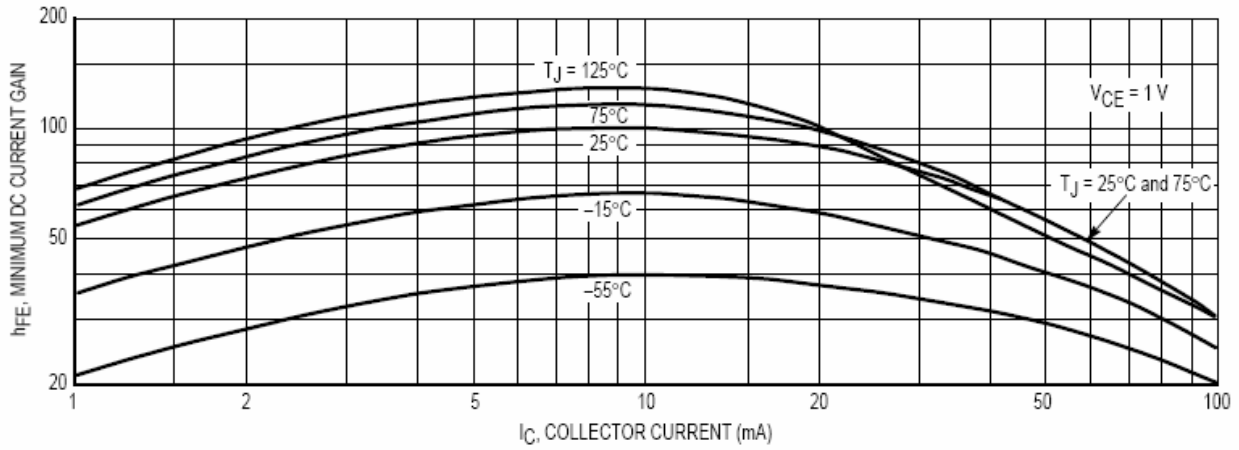

Figure 1 . Minimum Current Gain Characteristics

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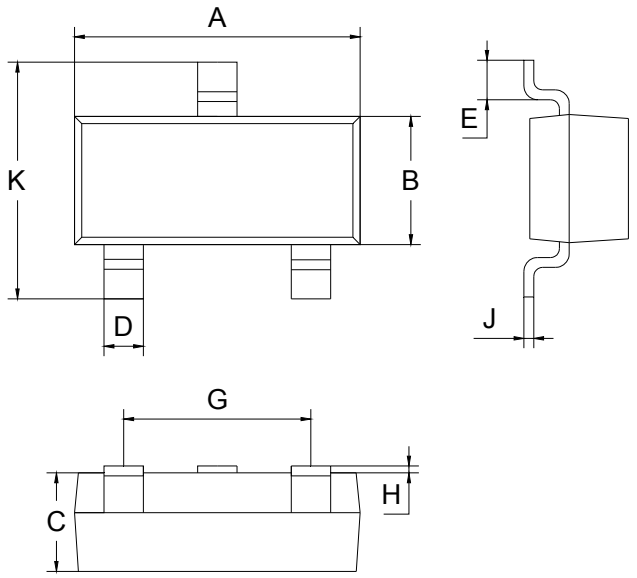
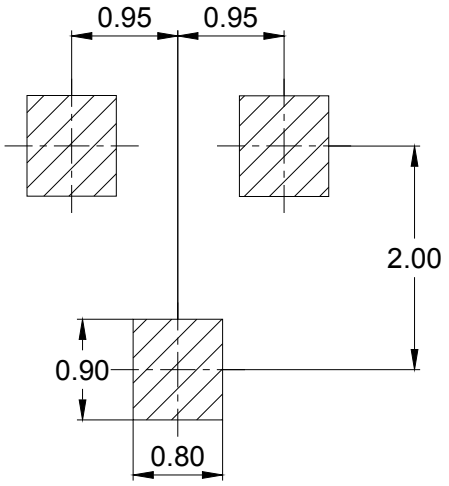
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



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		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBT2369	SOT-23	3000/Tape&Reel