

NPN General Purpose Amplifier

MMBT2369

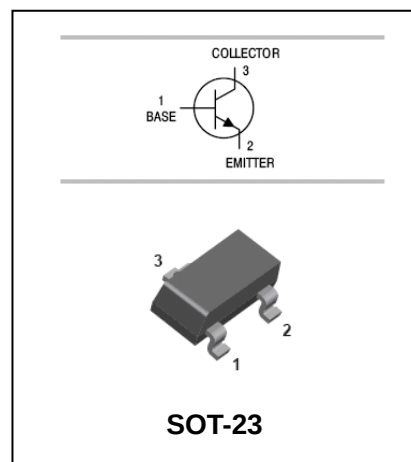
FEATURES

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



APPLICATIONS

- Use as a medium power amplifier.



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

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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	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°C unless otherwise specified

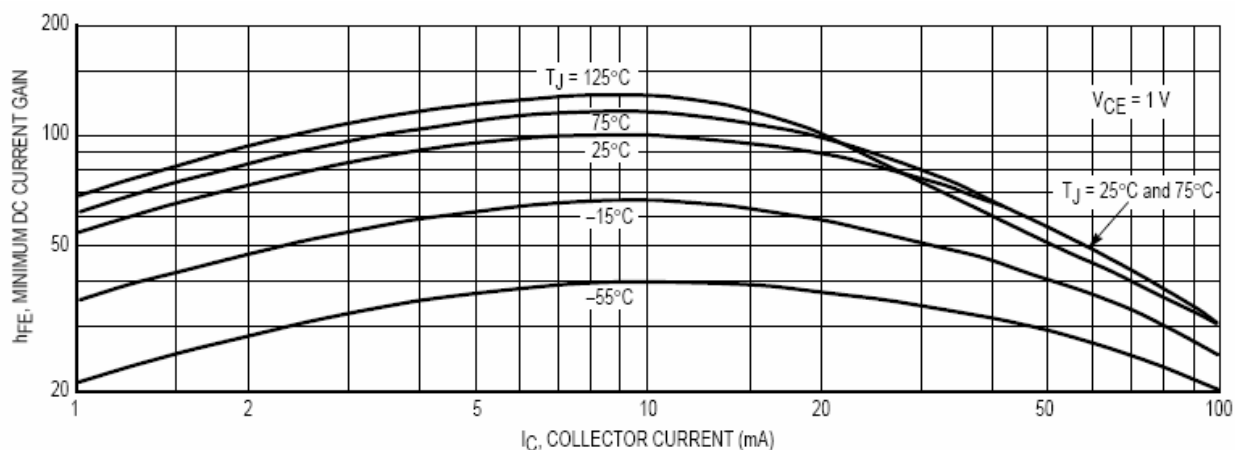


Figure 1 . Minimum Current Gain Characteristics

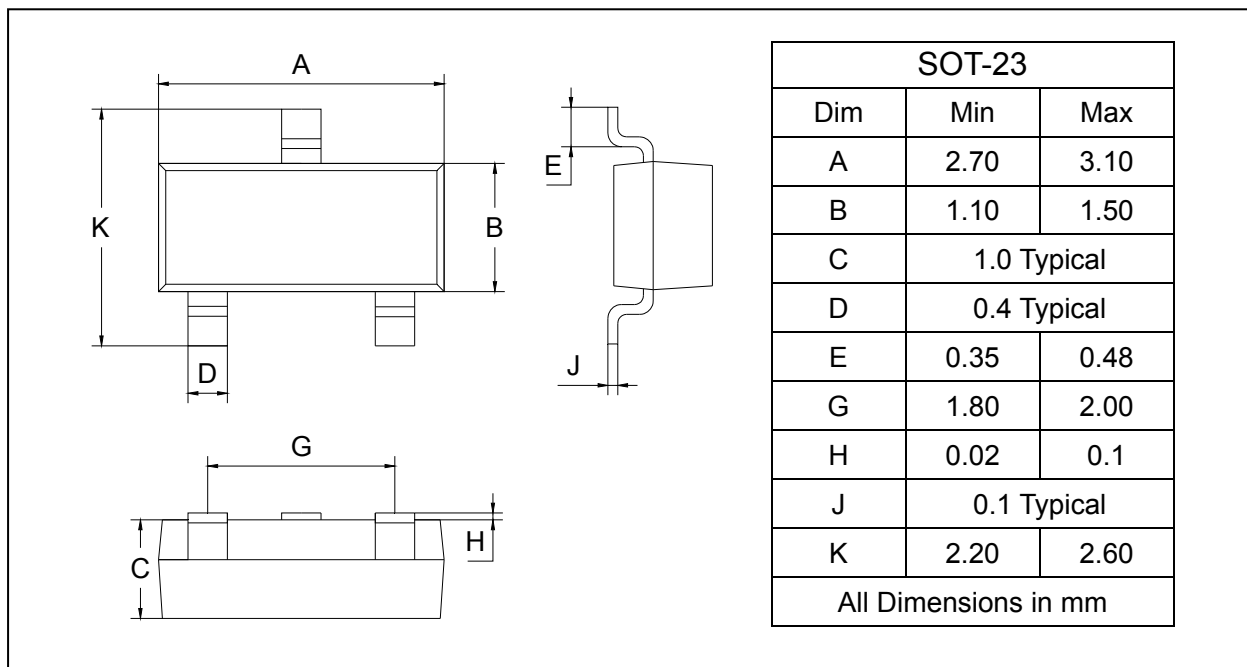
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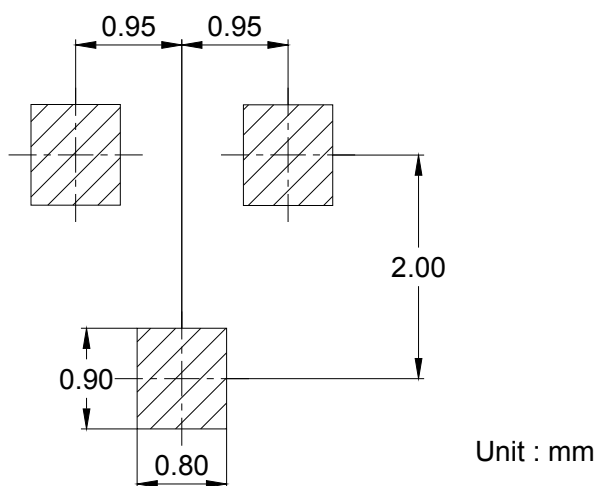
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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