NPN General Purpose Amplifier MMBT2369A

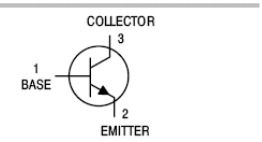
FEATURES

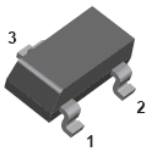
- Epitaxial planar die construction.
- Ultra-small surface mount package.

Lead-free

APPLICATIONS

- Use as a medium power amplifier.





SOT-23

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT2369A	1JA	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	-55to+150	℃

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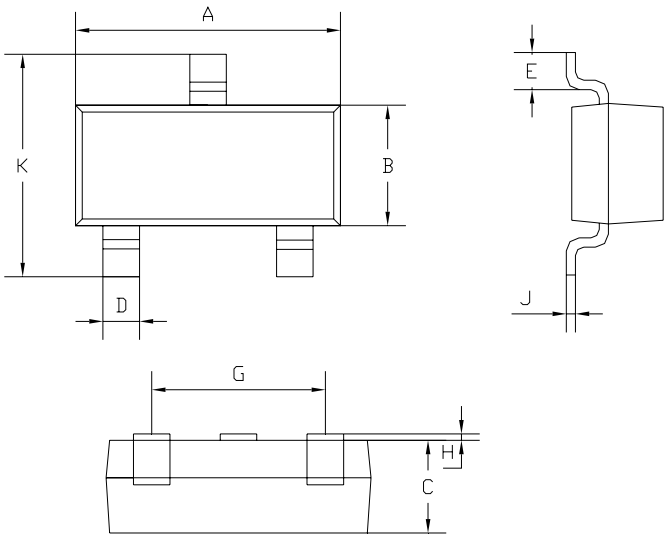
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	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			120	
		V_{CE}=0.35V I_C=10mA	40			
		V_{CE}=0.4V I_C=30mA	30			
		V_{CE}=1.0V I_C=100mA	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA I_B=1.0mA I_C=30mA I_B=3.0mA I_C=100mA I_B=10mA			0.2 0.25 0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA I_B=1.0mA I_C=30mA I_B=3.0mA I_C=100mA I_B=10mA	0.7		0.85 1.15 1.6	V
Output capacitance	C_{obo}	V_{CB}=5V,I_E=0.f=1.0MHz			4.0	pF
Storage time	t_S	I_{B1}=I_{B2}=I_C=10mA		5.0	13	ns
Turn-on time	t_{on}	V_{CC}=3V,I_C=10mA, I_{B1}=3mA		8.0	12	ns
Turn-off time	t_{off}	V_{CC}=3V,I_C=10mA, I_{B1}=3mA,I_{B2}=1.5mA		10	18	ns

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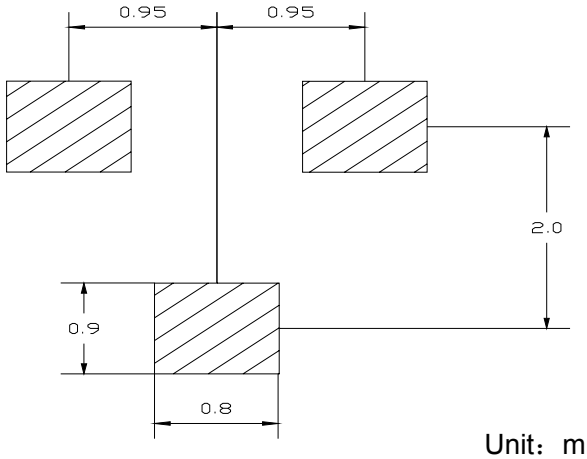
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit：mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBT2369A	SOT-23	3000/Tape&Reel