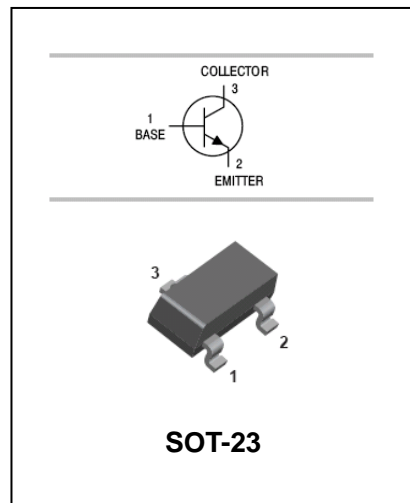


NPN Silicon Epitaxial Planar Transistor

MMBT4124

FEATURES

- NPN Silicon Planar.
- Switching Transistor.



ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT4124	ZC	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	30	V
V _{CEO}	Collector-Emitter Voltage	25	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	0.2	A
P _C	Collector Dissipation	330	mW
T _J , T _{stg}	Junction and Storage Temperature	-55~150	°C

NPN Silicon Epitaxial Planar Transistor

MMBT4124

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=3V, I_C=0$			50	nA
DC current gain	h_{FE}	$V_{CE}=1V, I_C=2mA$	120		360	
		$V_{CE}=1V, I_C=50mA$	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$			0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA$ $f=100MHz$	300			MHz
Output capacitance	C_{obo}	$V_{CB}=5V, I_E=0, f=140MHz$			4	pF
Input capacitance	C_{ibo}	$V_{BE}=0.5V, I_E=0$ $f=140MHz$			8	pF
Noise figure	N	$I_C=200\mu A,$ $V_{CE}=5V, R_g=2k\Omega$			6	dB
Small Signal Current Transfer	h_{fe}	$I_C=2mA, V_{CE}=1V, f=1KHz$	120	480		
Delay Time	t_d	$V_{CC}=3V, V_{BE(off)}=0.5v$ $I_C=10mA, I_{B1}=1mA$		24		ns
Rise Time	t_r			13		ns
Storage Time	t_s		$V_{CC}=3V,$		125	
Fall Time	t_f	$I_C=10mA, I_{B1}=I_{B2}=1mA$		11		ns

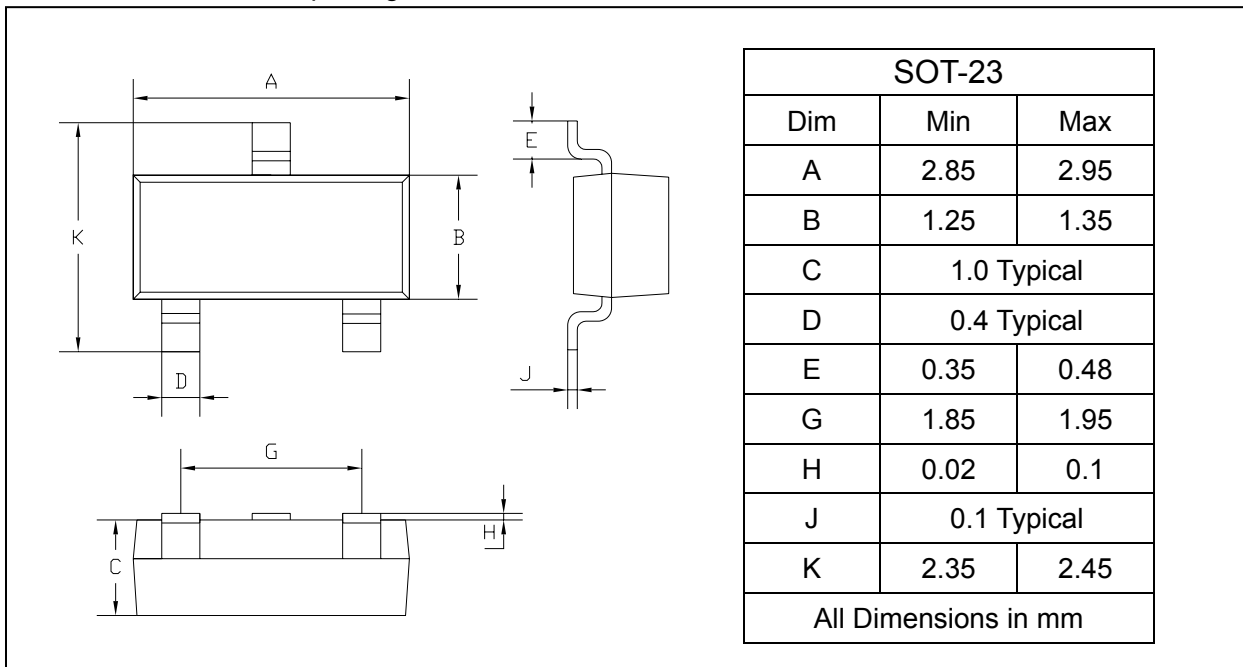
NPN Silicon Epitaxial Planar Transistor

MMBT4124

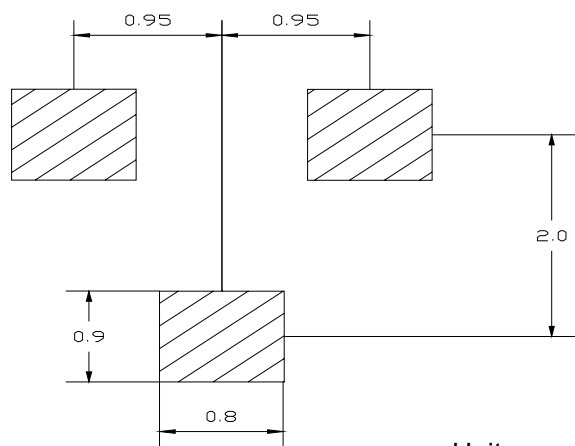
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBT4124	SOT-23	3000/Tape&Reel