Micro Commercial Components

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MMSTA42

NPN Small Signal Transistors

Features

- Epitaxial Planar Die Construction
- Ideal for Medium Power Amplification and Switching
- Ultra-small surface mount package
- Marking : K3M
- Case Material:Molded Plastic. UL Flammability Classificatio Rating 94-0 and MSL Rating 1

Maximum Ratings

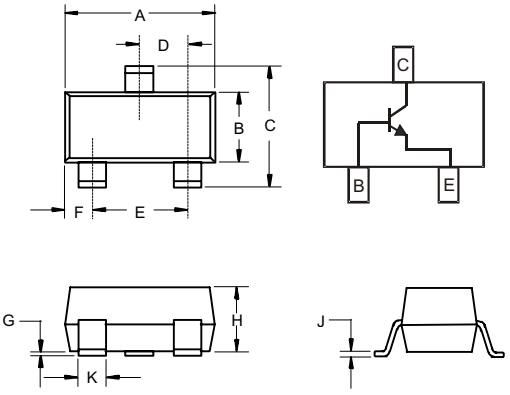
Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	300	V
V_{CBO}	Collector-Base Voltage	300	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current-Continuous (1) (3)	200	mA
P_C	Power dissipation (1)	200	mW
T_J	Junction Temperature	-55 to +150	^oC
T_{STG}	Storage Temperature	-55 to +150	^oC

Electrical Characteristics @ 25^{o}C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=1.0mAdc, I_B=0)	300	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=100uAdc, I_E=0)	300	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage (I_E=100uAdc, I_C=0)	6.0	---	Vdc
I_{CBO}	Collector-Base Cutoff Current (V_{CB}=200Vdc,I_E=0)	---	100	nAdc
I_{EBO}	Emitter-Base Cutoff Current (V_{CE}=6.0Vdc, I_C=0)	---	100	nAdc
ON CHARACTERISTICS(2)				
h_{FE}	DC Current Gain (I_C=1.0mAdc, V_{CE}=10Vdc) (I_C=10mAdc, V_{CE}=10Vdc) (I_C=30mAdc, V_{CE}=10Vdc)	 25 40 40	 --- --- ---	 --- --- ---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=20mAdc, I_B=2.0mAdc)	---	0.5	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=20mAdc, I_B=2.0mAdc)	---	0.9	Vdc
SMALL SIGNAL CHARACTERISTICS				
f_T	Current-Gain-Bandwidth Product (V_{CE}=20V, f=100MHz, I_C=10mA)	50	---	MHz
C_{CB}	Collector-Base Capacitance (V_{CB}=20V, f=1.0MHz, I_E=0)	---	3.0	pF

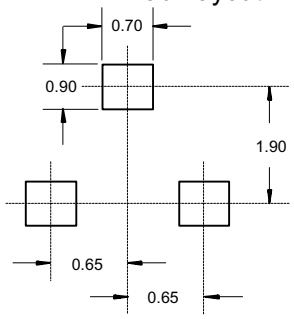
Note: 1. Valid provided that terminals are kept at ambient temperature.
2. Pulse test: Pulse width<300us, duty cycle<2%
3. When operated within safe operating area constraints.

SOT-323



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.012	.016	.30	.40	

Suggested Solder Pad Layout



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Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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