



Micro Commercial Components

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MMDT3904

200mW Plastic-Encapsulate Transistors

Features

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Collector Current: $I_C=0.2A$
- Marking: K6N
- Operating and Storage Junction Temperatures: $-55^{\circ}C$ to $150^{\circ}C$

Electrical Characteristics @ $25^{\circ}C$ Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=1.0mA$, $I_B=0$)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu A$, $I_E=0$)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=10\mu A$, $I_C=0$)	5.0		Vdc
I_{EBO}	Emitter Cutoff Current ($V_{EB}=5V$, $I_C=0$)		50	nAdc
I_{CEO}	Collector Cutoff Current ($V_{CE}=30V$, $I_B=0$)		50	nAdc
I_{CBO}	Collect Cutoff Current ($V_{CB}=30V$, $I_E=0$)		50	nAdc

ON CHARACTERISTICS

h_{FE}	DC Current Gain* ($I_C=10mA$, $V_{CE}=1.0V$) ($I_C=50mA$, $V_{CE}=1.0V$)	100 60	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=50mA$, $I_B=5.0mA$)		0.3	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=50mA$, $I_B=5.0mA$)		0.95	Vdc

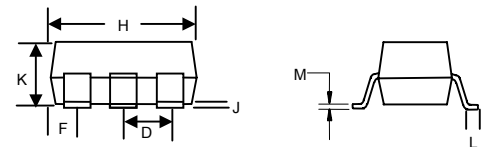
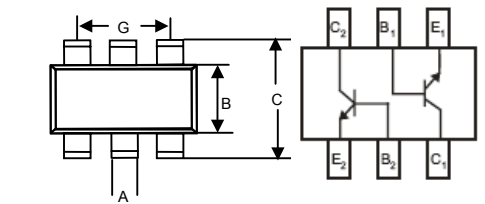
SMALL-SIGNAL CHARACTERISTICS

f_T	Current Gain-Bandwidth Product ($I_C=10mA$, $V_{CE}=20V$, $f=100MHz$)	300		MHz
C_{obo}	Output Capacitance ($V_{CB}=5.0V$, $I_E=0$, $f=1.0MHz$)		4.0	pF

SWITCHING CHARACTERISTICS

t_d	Delay Time	($V_{CC}=3.0V$, $V_{BE}=0.5V$)	35	ns
t_r	Rise Time	($I_C=10mA$, $I_{B1}=1.0mA$)	35	ns
t_s	Storage Time	($V_{CC}=3.0V$, $I_C=10mA$)	200	ns
t_f	Fall Time	($I_{B1}=I_{B2}=1.0mA$)	50	ns

SOT-363



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.004	.012	0.10	0.30	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
D	.026		0.65Nominal		
F	.012	.016	0.30	0.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.039	0.90	1.00	
L	.010	.016	0.25	0.40	
M	.004	.016	0.10	0.25	



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