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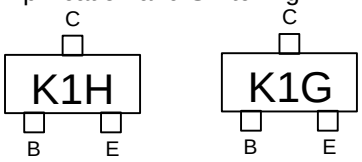
MMBTA05 THRU MMBTA06

NPN Small Signal General Purpose Amplifier Transistors

Features

- Epitaxial Planar Die Construction
- Complementary PNP Types Available (MMBTA55/MMBTA56)
- Ideal for Medium Power Amplification and Switching.

Pin Configuration
Top View



MMBTA05 MMBTA06

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage MMBTA05 MMBTA06	 60 80	V
V_{CBO}	Collector-Base Voltage MMBTA05 MMBTA06	 60 80	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Collector Current-Continuous	500	mA
P_D	Power Dissipation*	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	K/W
T_J	Operating Junction Temperature	-55 to +150	℃
T_{STG}	Storage Temperature	-55 to +150	℃

Electrical Characteristics @ 25℃ Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage [1] (I_C=1.0mAdc, I_B=0) MMBTA05 MMBTA06	 60 80	 --- ---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=100μAdc, I_C=0)	4.0	---	Vdc
I_{CBO}	Collector Cutoff Current (V_{CB}=60Vdc, I_E=0) MMBTA05 (V_{CB}=80Vdc, I_E=0) MMBTA06	 --- ---	 0.1 0.1	 μAdc μAdc
I_{CES}	Emitter Cutoff Current (V_{Ce}=60Vdc, I_{bo}=0) MMBTA05 (V_{Ce}=80Vdc, I_{bo}=0) MMBTA06	 --- ---	 0.1 0.1	 μAdc μAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain (V_{CE}=1.0Vdc, I_C=10mAdc) (V_{CE}=1.0Vdc, I_C=100mAdc)	 100 100	 --- ---	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=100mAdc, I_B=10mAdc)	---	0.25	Vdc
$V_{BE(sat)}$	Base-Emitter On Voltage (I_C=100mAdc, V_{CE}=1.0Vdc)	---	1.2	Vdc
f_T	Current-Gain—Bandwidth Product [2] (I_C=10mAdc, V_{CE}=2.0Vdc, f=100MHz)	100	---	MHz

* Valid provided that terminals are kept at ambient temperature..
** Pulse Test: Pulse Width<300us, Duty Cycle<2.0

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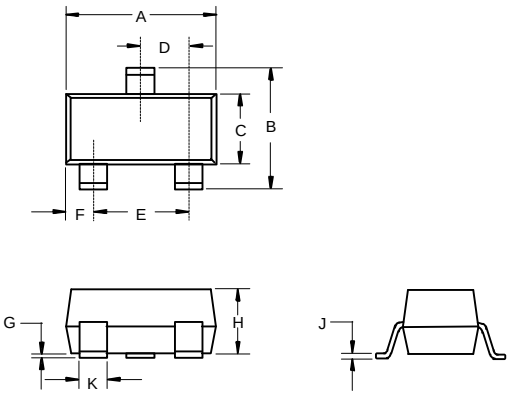

DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout