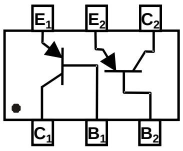
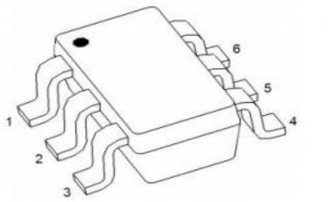
DMMT5401 PNP Transistors



■ Features

- ● Epitaxial Planar Die Construction
- ● Complementary NPN Type Available (DMMT5551)
- ● Ideal for Medium Power Amplification and Switching
- ● Intrinsically Matched PNP Pair (Note 1)
- ● 2% Matched Tolerance, hFE, $V_{CE(SAT)}$, $V_{BE(SAT)}$
- ● 1% Matched Tolerance, Available (Note 2)
- ● Also Available in Lead Free Version
- ●Marking：K4S



SOT23-6L

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-160	V
Collector - Emitter Voltage	V_{CEO}	-150	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-200	mA
Collector Power Dissipation	P_D	300	mW
Thermal Resistance, Junction to Ambient (Note 3)	$R_{\theta JA}$	417	K/W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to +150	

Notes:

1. Built with adjacent die from a single wafer.
2. Contact the Diodes, Inc. Sales department.
3. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA， I_E=0	-160			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA， I_B=0	-150			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100μA， I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB} = -120V, I_E = 0			-50	nA
		V_{CB} = -120V, I_E = 0, T_A = 100℃				μA
Emitter cut-off current	I_{EBO}	V_{EB} = -3.0V, I_C = 0			-50	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -10mA, I_B = -1.0mA			-0.2	V
		I_C = -50mA, I_B = -5.0mA			-0.5	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C = -10mA, I_B = -1.0mA			-1	
		I_C = -50mA, I_B = -5.0mA				
DC current gain	h_{FE}	I_C = -1.0mA, V_{CE} = -5.0V	50			
		I_C = -10mA, V_{CE} = -5.0V	60		240	
		I_C = -50mA, V_{CE} = -5.0V	50			
Small Signal Current Gain		V_{CE} = -10V, I_C = -1.0mA,f = 1.0kHz	40			
Collector output capacitance	C_{obo}	V_{CB} = -10V, f = 1.0MHz, I_E = 0			6	pF
Transition frequency	f_T	V_{CE}= -10V, I_C= -10mA,f=100MHz	100		300	MHz
Noise Figure	N_F	V_{CE} = -5.0V, I_C = -200uA R_S = 10Ω, f=1.0kHz			8	dB

■ Typical Characterisitics

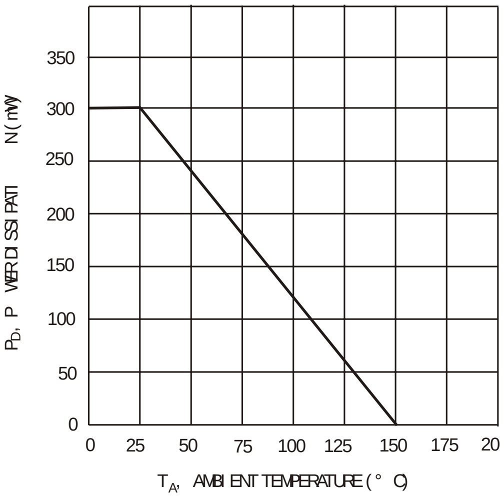


Fig. 1, Max Power Dissipation vs Ambient Temperature

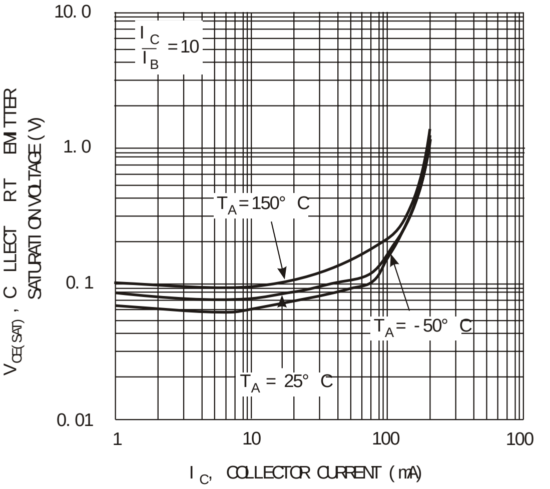


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

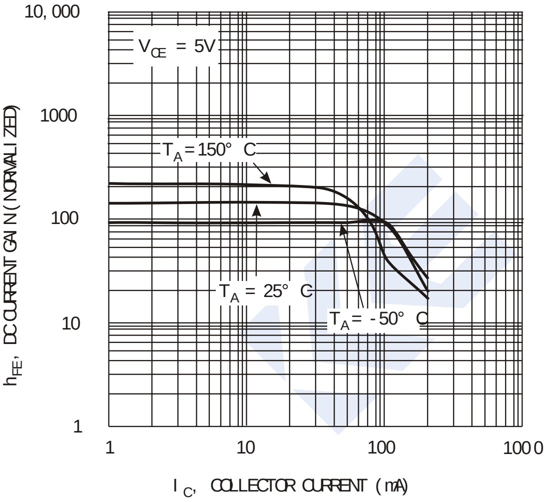


Fig. 3, DC Current Gain vs Collector Current

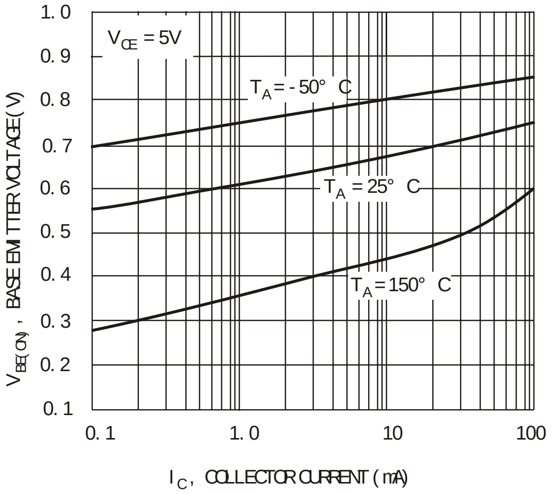


Fig. 4, Base Emitter Voltage vs. Collector Current

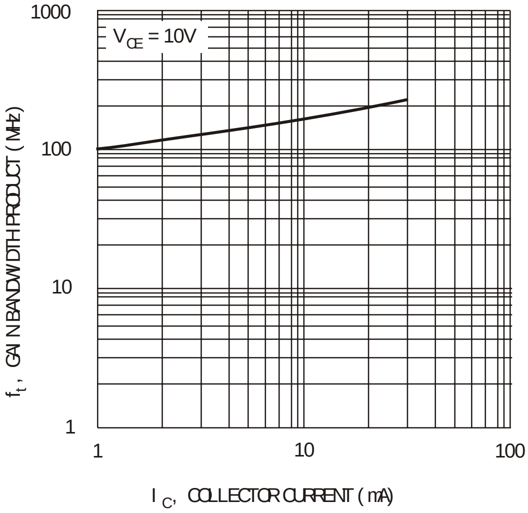
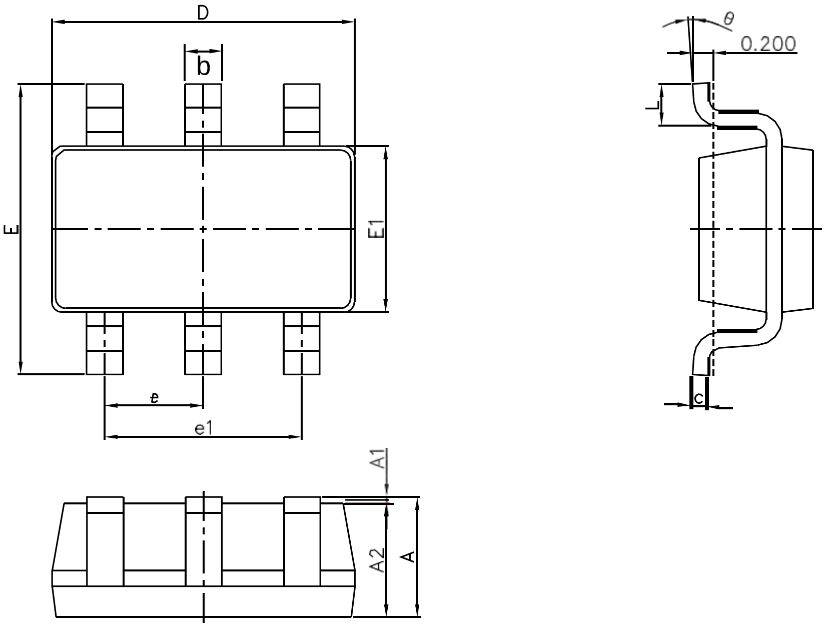


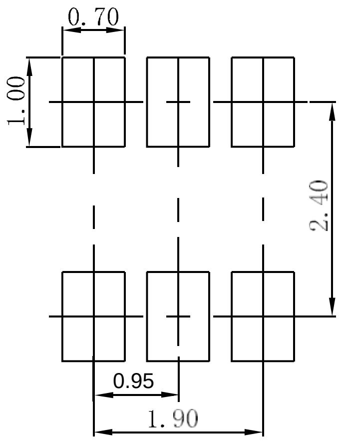
Fig. 5, Gain Bandwidth Product vs Collector Current

SOT-23-6L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

SOT-23-6L Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.