DMMT5401-6L

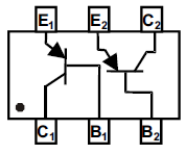
Dual Bipolar Transistor(PNP+PNP)

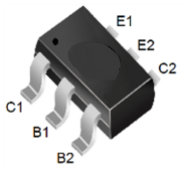
Features

- Epitaxial Planar Die Construction.
- Complementary NPN Type Available (DMMT5551-6L).

Mechanical Data

- Case: SOT-23-6L
- Molding compound, UL flammability classification rating 94V-0.
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208.





SOT-23-6L

Ordering Information

Part Number	Package	Shipping	Marking Code
DMMT5401-6L	SOT-23-6L	3000 pcs / Tape & Reel	K4S

Maximum Ratings (@T_A=25℃ unless otherwise specified For Tr1 and Tr2 in common)

Symbol	Parameter	Value	Units
MAXIMUM RATINGS			
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C(Note 1)	Collector Current - Continuous	-0.2	A
Thermal Characteristic			
P_D(Note 1,2)	Power Dissipation Ta=25℃	300	mW
$R_{\theta JA}$(Note 1)	Thermal Resistance, Junction to Ambient	417	℃/W
T_J	Junction Temperature	-55~150	℃
T_{STG}	Junction and Storage Temperature	-55 to +150	℃

Notes:1、Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.

2、Maximum combined dissipation.

3、Short duration test pulse used to minimize self-heating effect.

4、The DC Current Gain, h_{FE}, (matched at I_C = -10mA and V_{CE} = -5V) Collector Emitter Saturation Voltage, $V_{CE(SAT)}$, and BaseEmitter Saturation Voltage, $V_{BE(SAT)}$ are matched with typical matched tolerances of 1% and maximum of 2%.

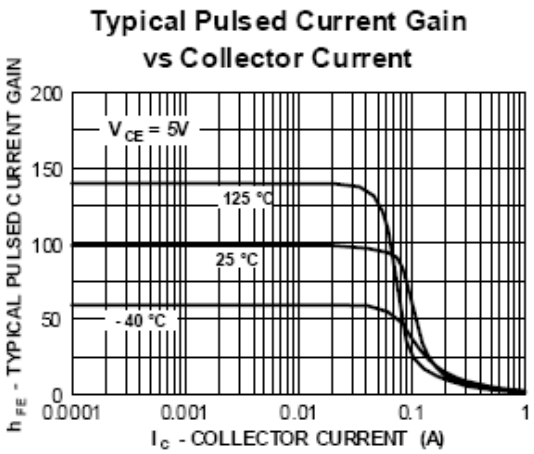
DMMT5401-6L

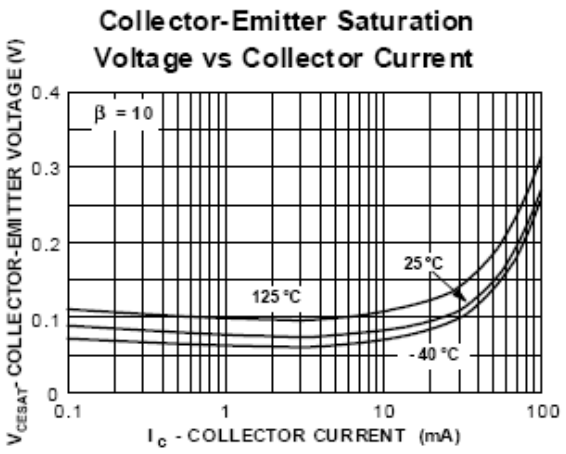
Dual Bipolar Transistor(PNP+PNP)

Electrical Characteristics (@T_A=25℃ unless otherwise specified For Tr1 and Tr2 in common)

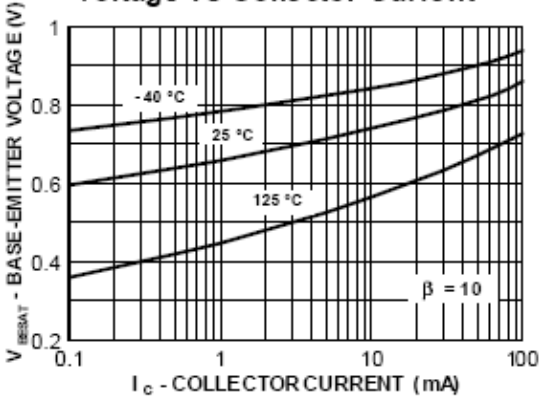
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS (Note 3)						
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	-160	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,I_B=0	-150	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,I_C=0	-5	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=-120V,I_E=0 V_{CB}=-120V,I_E=0,T_A= 100℃	-	-	-50 -50	nA uA
Emitter cut-off current	I_{EBO}	V_{EB}=-3V,I_C=0	-	-	-50	nA
ON CHARACTERISTICS (Note 3)						
DC Current Gain (Note 4)	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	-	-	-
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-10mA, I_B=-1mA I_C=-50mA, I_B=-5mA	-	-	-0.2 -0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C = -10mA, I_B = -1.0mA I_C = -50mA, I_B = -5.0mA	-	-	-1	V
SMALL SIGNAL CHARACTERISTICS						
Transition frequency	f_T	V_{CE}=-10V, I_C=-10mA f=100MHz	100	-	300	MHz
Collector output capacitance	C_{obo}	V_{CB}=-10V,f=1MHz	-	-	6	pF
Small Signal Current Gain	hfe	I_C=-1.0mA,V_{CE}=-10V,f= 1.0kHz	40	-	200	-
Noise Figure	NF	V_{CE} = -5.0V, I_C = -200uA, R_S = 10Ω,f = 1.0kHz	-	-	8	dB

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

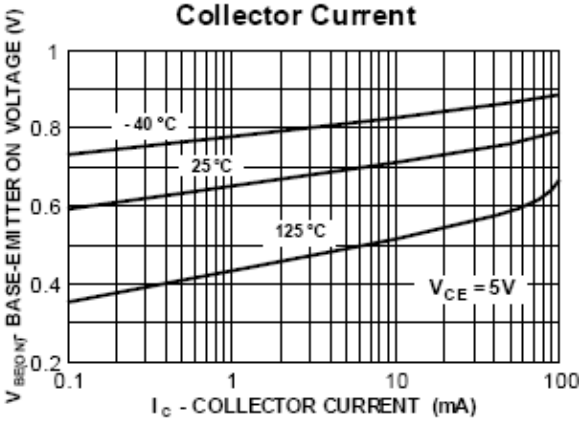




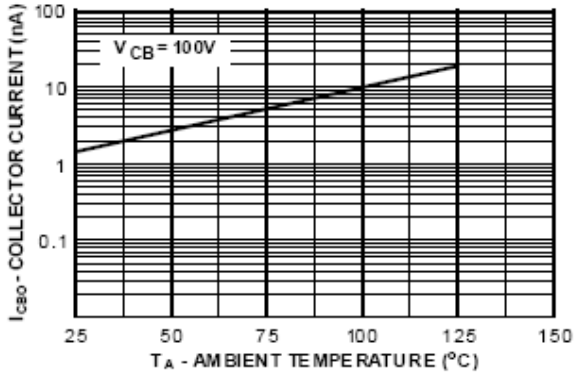
Base-Emitter Saturation Voltage vs Collector Current



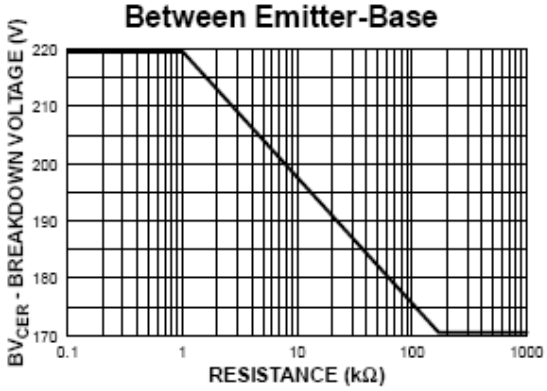
Base-Emitter ON Voltage vs Collector Current



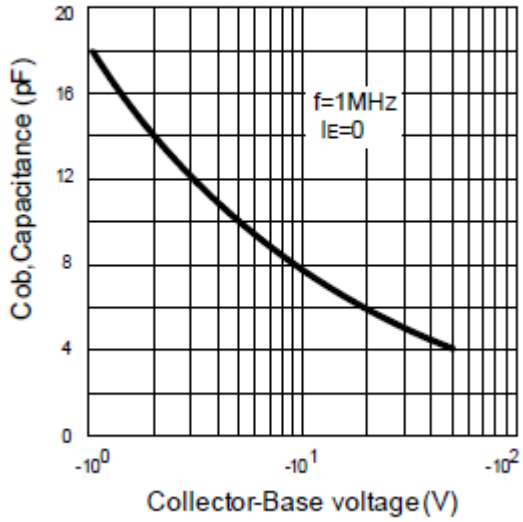
Collector-Cutoff Current vs Ambient Temperature



Collector-Emitter Breakdown Voltage with Resistance Between Emitter-Base



Collector output Capacitance

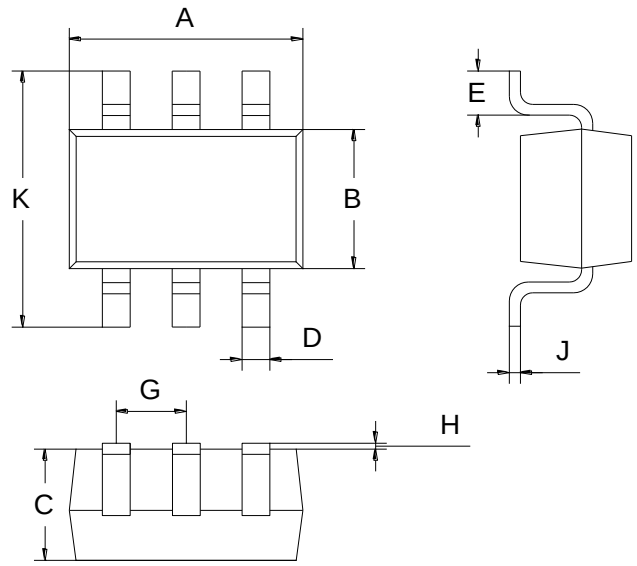


DMMT5401-6L

Dual Bipolar Transistor(PNP+PNP)

Package Outline Dimensions(unit:mm)

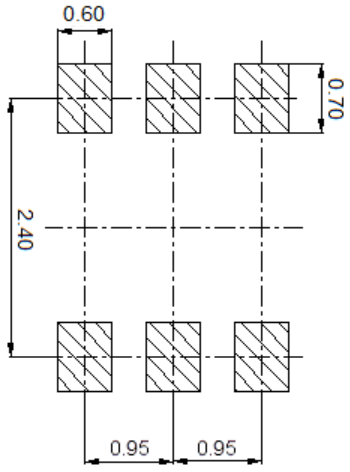
SOT-23-6L



SOT-23-6L		
Dim	Min	Max
A	2.80	3.00
B	1.50	1.70
C	1.00	1.20
D	0.35	0.45
E	0.35	0.55
G	0.90	1.00
H	0.02	0.10
J	0.10	0.20
K	2.60	3.00

SOLDERING FOOTPRINT(unit:mm)

SOT-23-6L



Ordering Information

Part Number	Package	Shipping	Marking Code
DMMT5401-6L	SOT-23-6L	3000 pcs / Tape & Reel	K4S