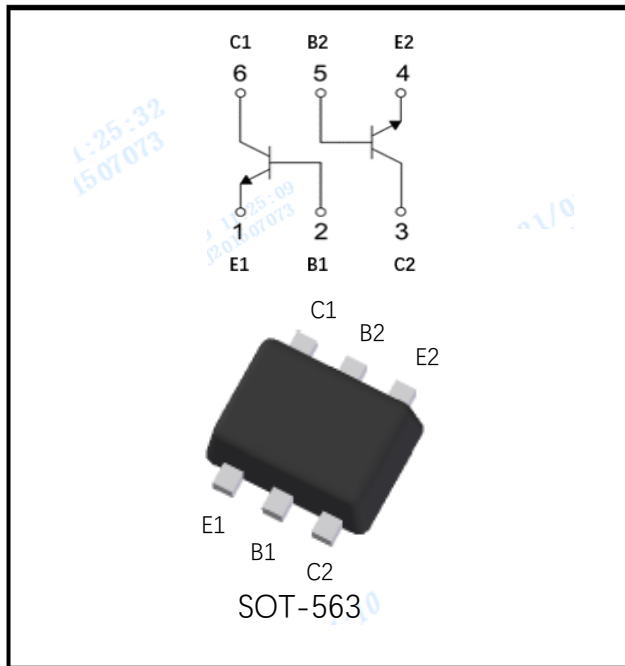


Dual NPN Small Signal Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- NPN

Mechanical Data

- **Package:** SOT-563
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** KAP
- **Solid point:** A1 positioning point

■Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	V_{CEO}	V	$I_C = 1mA, I_B = 0$	40
Collector-Base Voltage	V_{CBO}	V	$I_C = 10\mu A, I_E = 0$	60
Emitter-Base Voltage	V_{EBO}	V	$I_E = 10\mu A, I_C = 0$	6
Collector Current	I_C	mA		200
Collector Power Dissipation	P_C	mW		200
Junction Temperature	T_J	°C		-55 to +150
Storage Temperature	T_{STG}	°C		-55 to +150



MMDT3904V

■Electrical Characteristics (Ta=25℃ unless otherwise specified)

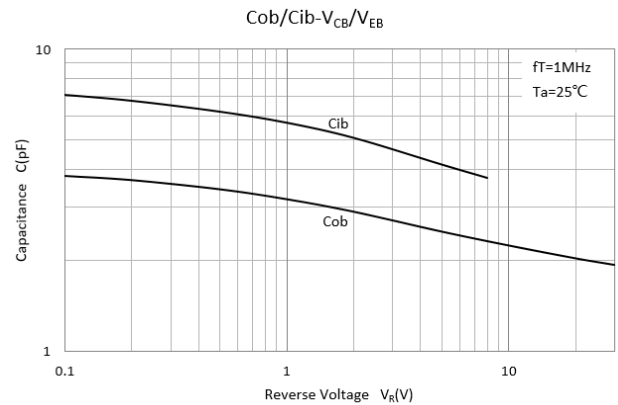
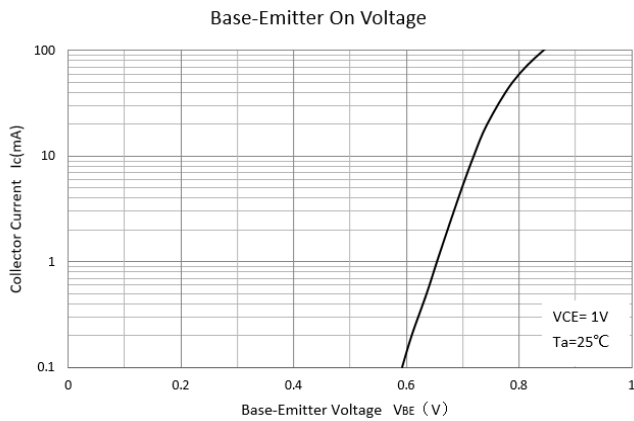
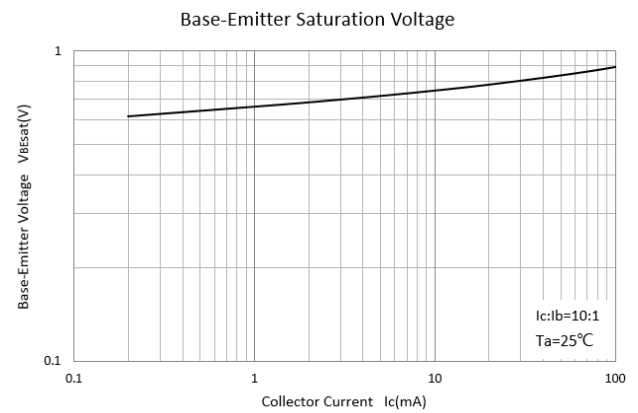
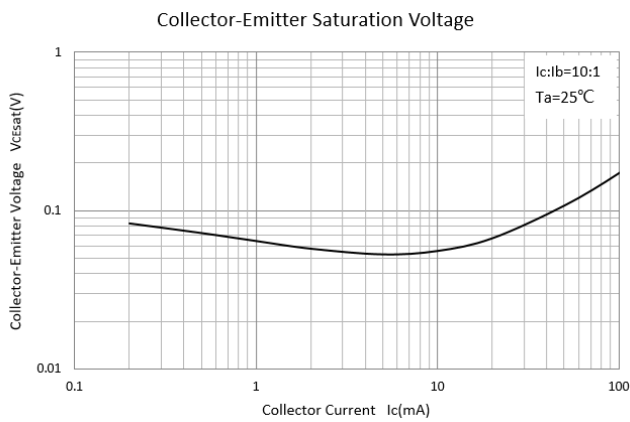
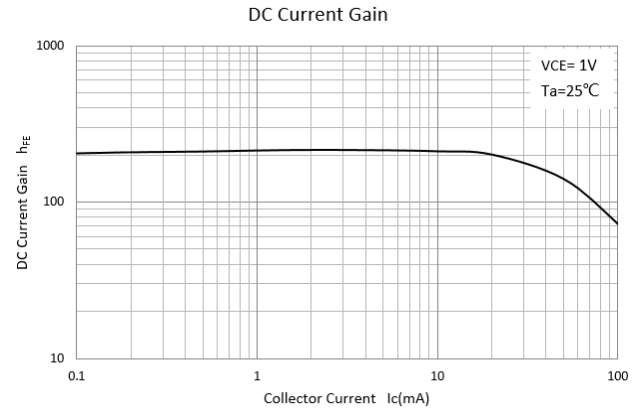
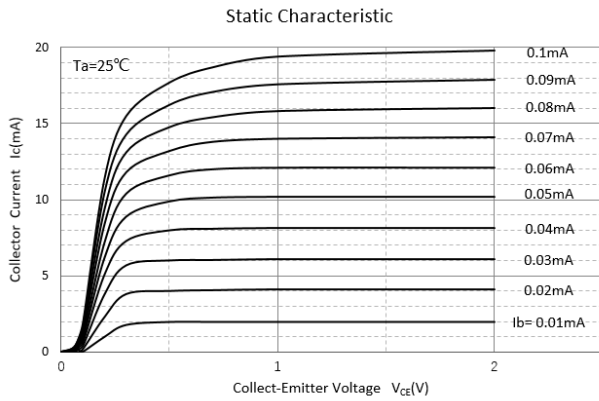
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	V_{CBO}	V	IC=10μA, IE=0	60		
Collector-emitter breakdown voltage	V_{CEO}	V	IC=1mA, IB=0	40		
Emitter-base breakdown voltage	V_{EBO}	V	IE=10μA, IC=0	6		
Base Cutoff Current	I_{BL}	nA	VCE=30V, VEB(OFF)=3V			50
Collector Cutoff Current	I_{CEX}	nA	VCE=30V, VEB(OFF)=3V			50
DC current gain	$h_{FE(1)}$		VCE=1V, IC=0.1mA	40		
	$h_{FE(2)}$		VCE=1V, IC=1mA	70		
	$h_{FE(3)}$		VCE=1V, IC=10mA	100		300
	$h_{FE(4)}$		VCE=1V, IC=50mA	60		
	$h_{FE(5)}$		VCE=1V, IC=100mA	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=10mA, IB=1mA			0.2
			IC=50mA, IB=5mA			0.3
Baser-emitter saturation voltage	$V_{BE(sat)}$	V	IC=10mA, IB=1mA	0.65		0.85
			IC=50mA, IB=5mA			0.95
Collector-base Output Capacitance	Cobo	pF	VCB=5.0Vdc, f=1.0MHz, IE=0			4
Transition frequency	Ft	MHz	VCE=20V, IC=10mA, f=100MHz	300		
Noise figure	NF	dB	VCE=5V, Ic=0.1mA, f=1kHz, Rg=1KΩ			5

■ Ordering Information (Example)

Prefered P/N	Packing Code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
MMDT3904V	F2	Approximate 0.0035	3000	30000	120000	7" reel



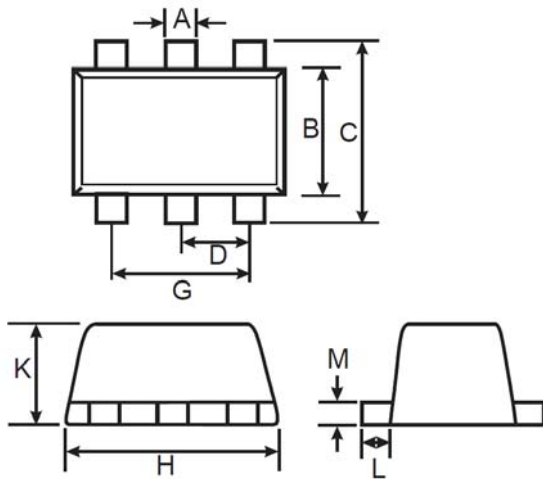
■ Characteristics (Typical)





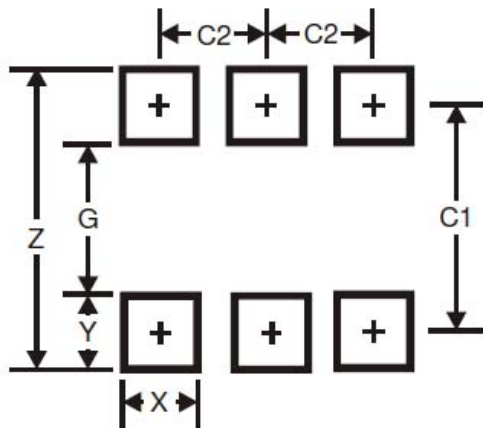
MMDT3904V

■ SOT-563 Package Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.006	0.011	0.15	0.30
B	0.043	0.051	1.10	1.30
C	0.059	0.067	1.50	1.70
D	0.016	0.024	0.40	0.60
G	0.035	0.043	0.90	1.10
H	0.059	0.067	1.50	1.70
K	0.021	0.026	0.55	0.65
L	0.004	0.011	0.10	0.30
M	0.004	0.007	0.10	0.18

■ SOT-563 Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.2
G	1.2
X	0.375
Y	0.5
C1	1.7
C2	0.5



Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.