Dual NPN+PNP Small Signal Transistor

Features

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

Mechanical Data Terminal: Plated leads, solderable per

■ **Ordering Information** (Example)

			PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMDT5451	F2	Approximate 0.009g	3000	30000	120000	7” reel

■**TR1 PNP Pin3 4 5 Maximum Ratings** (Ta=25 Unless otherwise specified

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V	IC=-100μA,IE=0	-160
Collector-Emitter Voltage	VCEO	V	IC=-1mA,IB=0	-150
Emitter-Base Voltage	VEBO	V	IE=-10μA,IC=0	-5
Collector Current -Continuous	IC	mA		-200

■TR2 NPN Pin1 2 6 Maximum Ratings (Ta=25 Unless otherwise specified

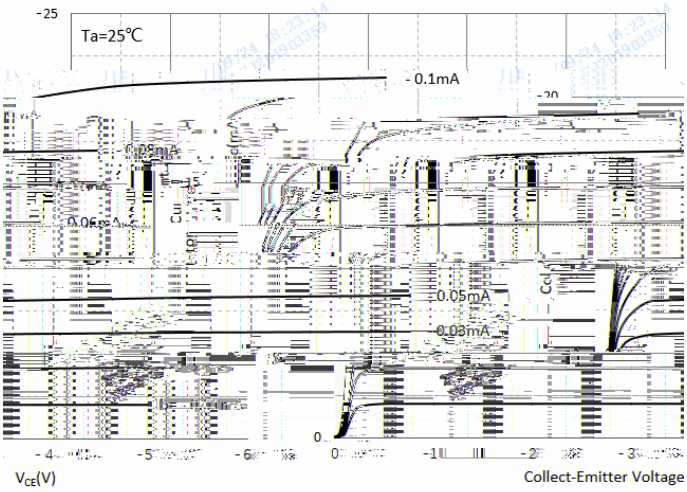
Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V	IC=100μA,IE=0	180
Collector-Emitter Voltage	VCEO	V	IC=1mA,IB=0	160
Emitter-Base Voltage	VEBO	V	IE=10μA,IC=0	6
Collector Current -Continuous	IC	mA		200
Total Device Dissipation	PC	mW		200
Junction Temperature	Tj			150
Storage Temperature	TSTG			-55 to +150

■TR2 NPN Pin1 2 6 Electrical Characteristics (Ta=25 unless otherwise specified)

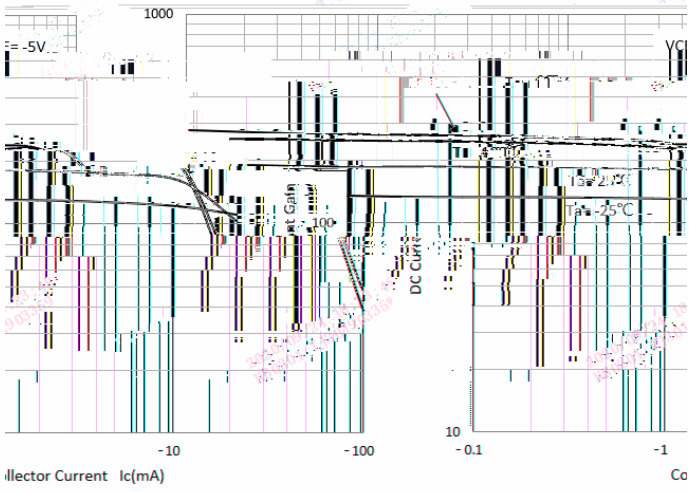
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	V_{CBO}	V	IC=100μA,IE=0	180		
Collector-emitter breakdown voltage	V_{CEO}	V	IC=1mA,IB=0	160		
Emitter-base breakdown voltage	V_{EBO}	V	IE=10μA,IC=0	6		
Collector cut-off current	I_{CBO}	nA	VCB=120V,IE=0			50
Emmiter cut-off current	I_{EBO}	nA	VEB=4V, IC=0			50
DC current gain	$h_{FE}1$		VCE=5V,IC=1mA	80		
	$h_{FE}2$		VCE=5V,IC=10mA	100		300
	$h_{FE}3$		VCE=5V,IC=50mA	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=10mA,IB=1mA			0.15
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=50mA,IB=5mA			0.2
Base-emitter saturation voltage	$V_{BE(sat)}$	V	IC=10mA,IB=1mA			1
Base-emitter saturation voltage	$V_{BE(sat)}$	V	IC=50mA,IB=5mA			1
Transition frequency	f_T	MHz	VCE=10V,IC=10mA,f=100MHz	100		300
Output capacitance	Cobo	pF	VCE=10V,IE=0,f=1MHz			6

■ TR1 PNP Pin3 4 5 Characteristics (Typical)

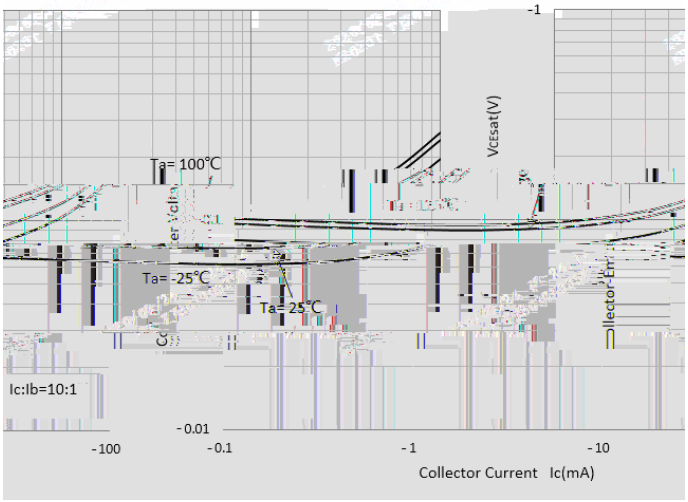
Static Characteristic



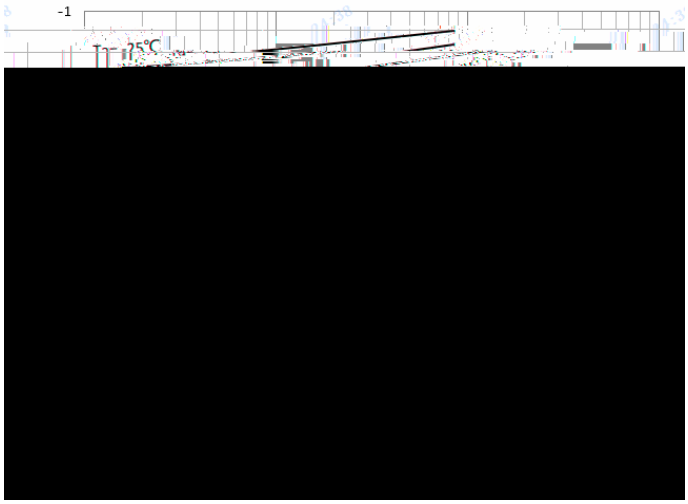
DC Current Gain

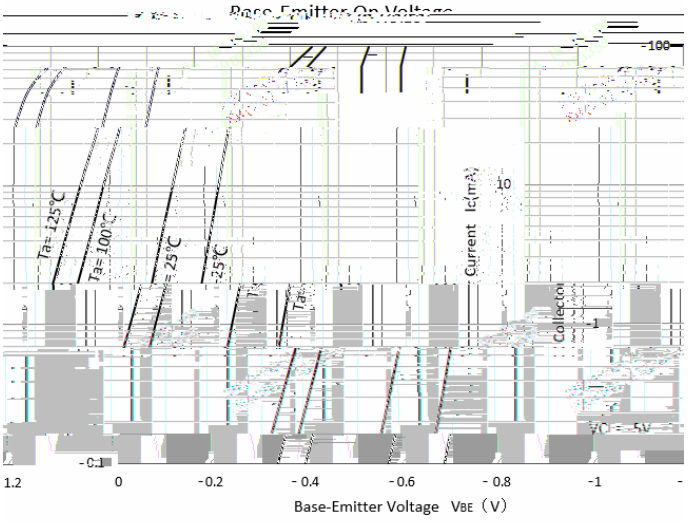


Collector-Emitter Saturation Voltage

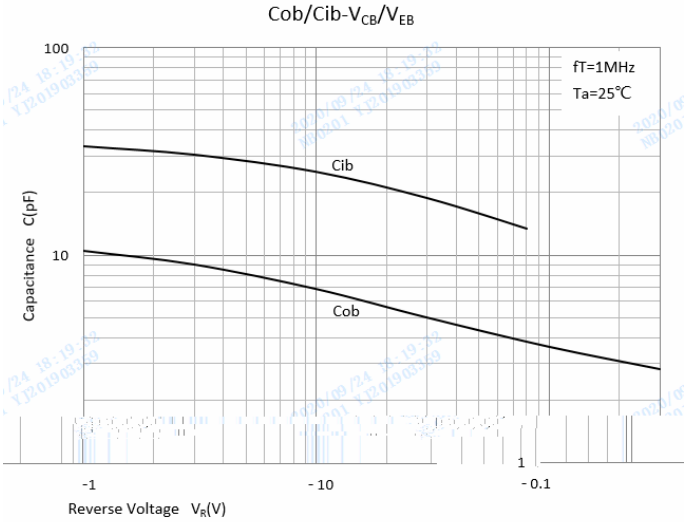


Base-Emitter Saturation Voltage



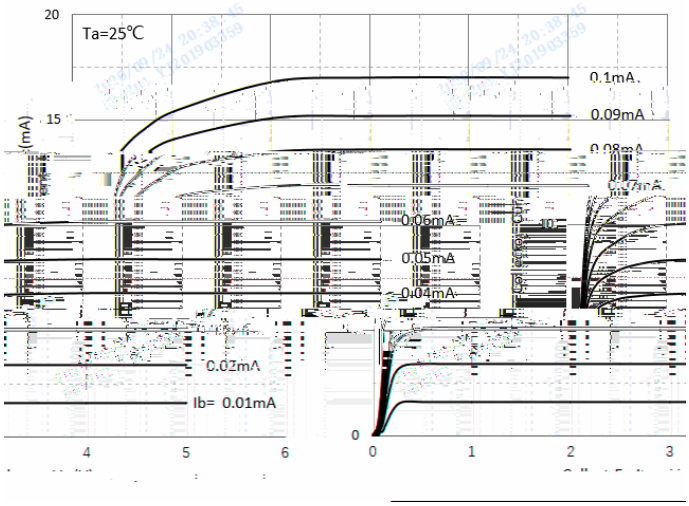


Cob/Cib-V_{CB}/V_{EB}

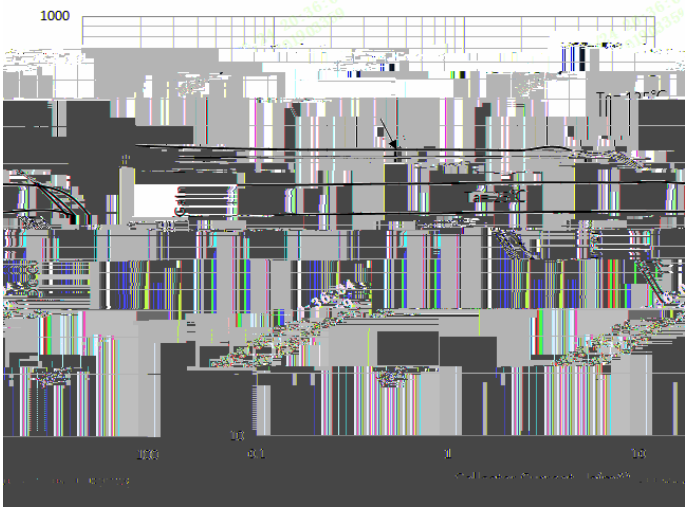


■ TR2 NPN Pin1 2 6 Characteristics (Typical)

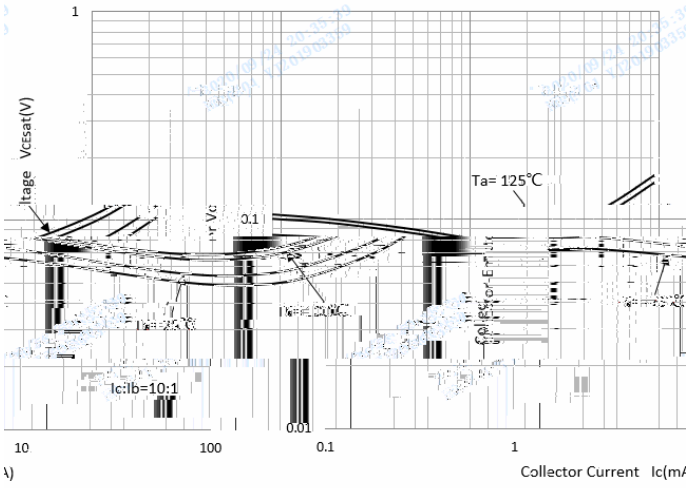
Static Characteristic



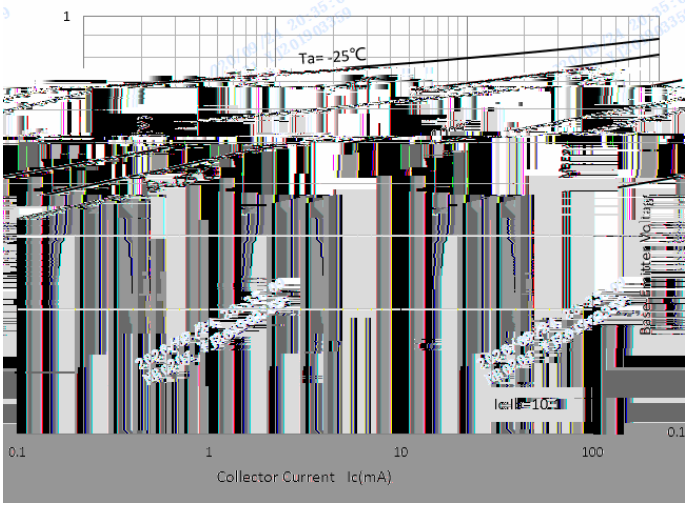
DC Current Gain



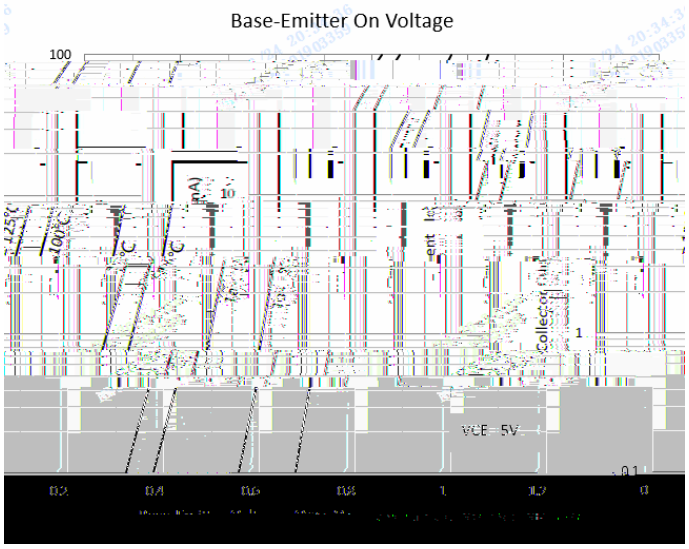
Collector-Emitter Saturation Voltage



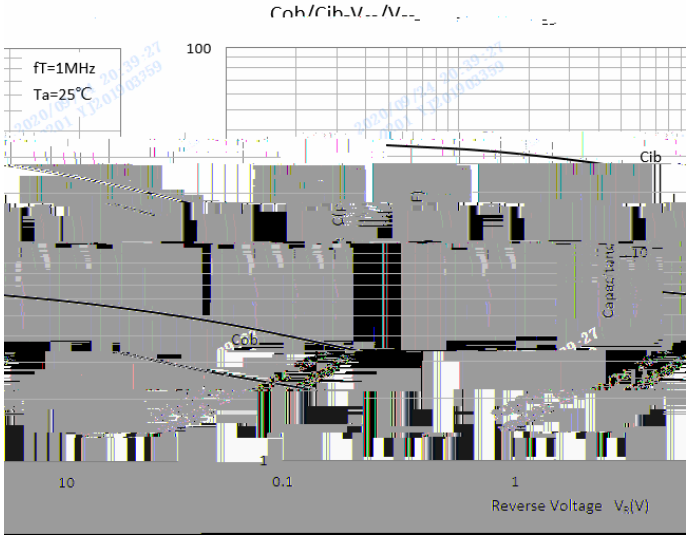
Base-Emitter Saturation Voltage

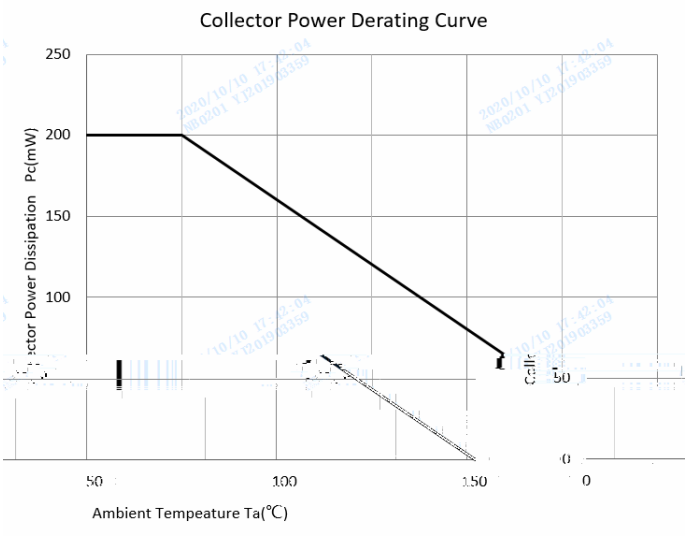


Base-Emitter On Voltage

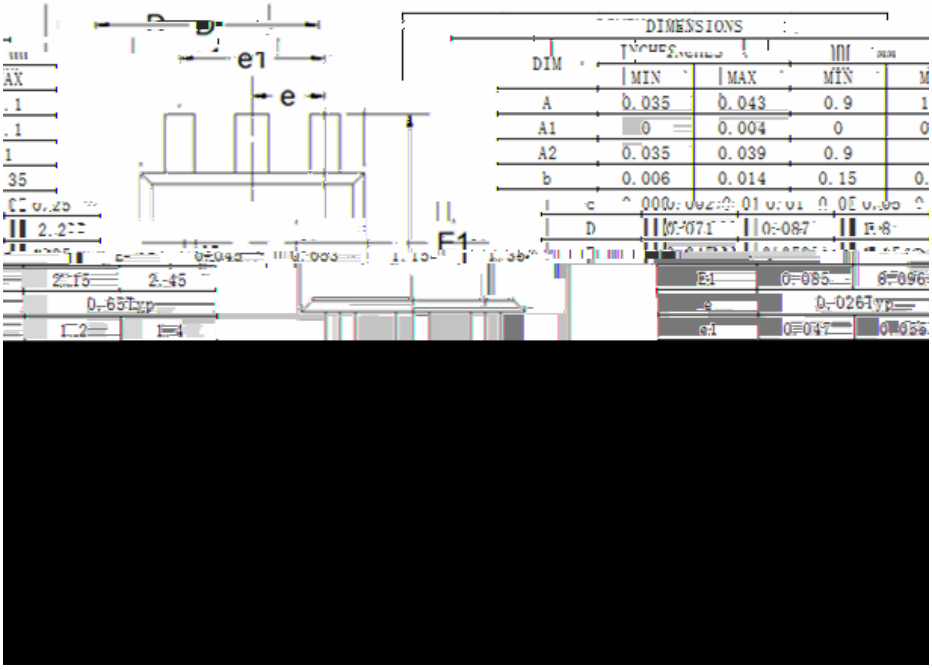


Cob/Cib-V

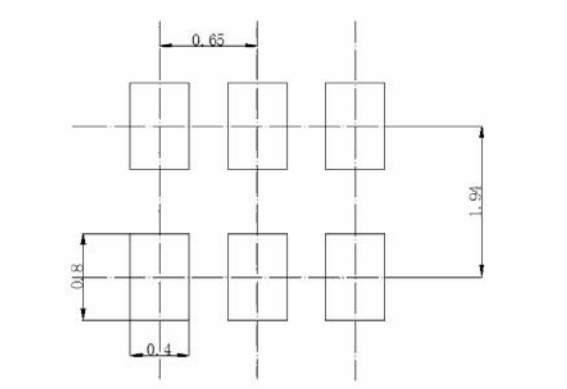




■SOT-363 Package Outline Dimensions



■SOT-363 Soldering Footprint



Unit mm

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