

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

Max. Power Dissipation 300mW

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



MMDT5451

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

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



MMDT5451

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)

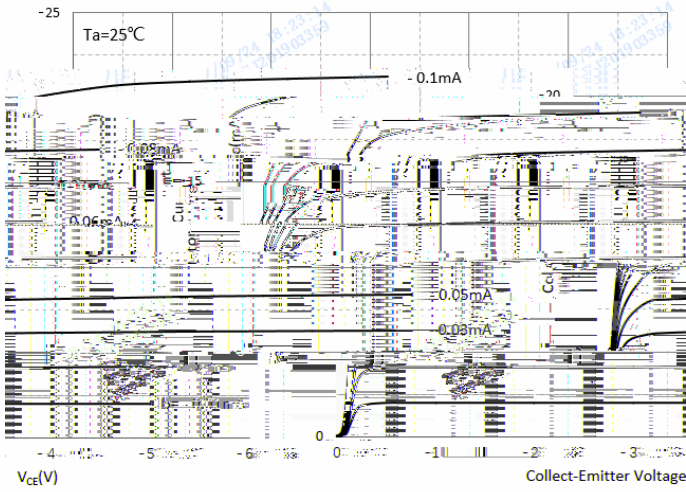
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	VCBO	V	IC=100μA,IE=0	180		
Collector-emitter breakdown voltage	VCEO	V	IC=1mA,IB=0	160		
Emitter-base breakdown voltage	VEBO	V	IE=10μA,IC=0	6		
Collector cut-off current	ICBO	nA	VCB=120V,IE=0			50
Emmitter cut-off current	IEBO	nA	VEB=4V, IC=0			50
DC current gain	hFE1		VCE=5V,IC=1mA	80		
	hFE2		VCE=5V,IC=10mA	100		300
	hFE3		VCE=5V,IC=50mA	30		
Collector-emitter saturation voltage	VCE(sat)	V	IC=10mA,IB=1mA			0.15
Collector-emitter saturation voltage	VCE(sat)	V	IC=50mA,IB=5mA			0.2
Base-emitter saturation voltage	VBE(sat)	V	IC=10mA,IB=1mA			1
Base-emitter saturation voltage	VBE(sat)	V	IC=50mA,IB=5mA			1
Transition frequency	fT	MHz	VCE=10V,IC=10mA,f=100MHz	100		300
Output capacitance	Cobo	pF	VCE=10V,IE=0,f=1MHz			6



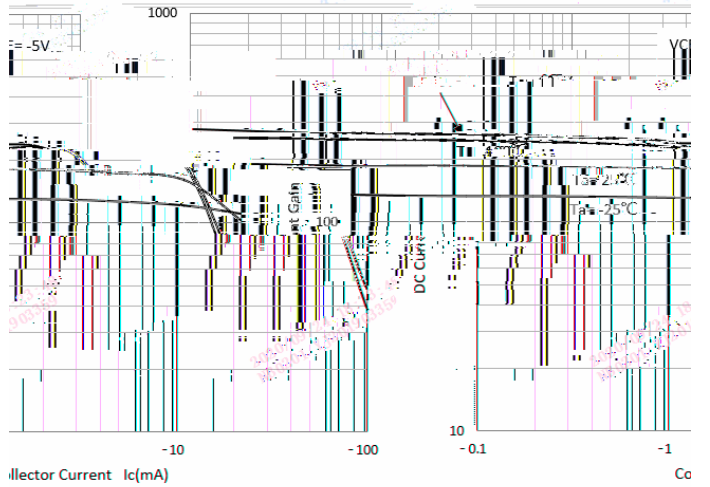
MMDT5451

TR1 PNP Pin3 4 5 Characteristics (Typical)

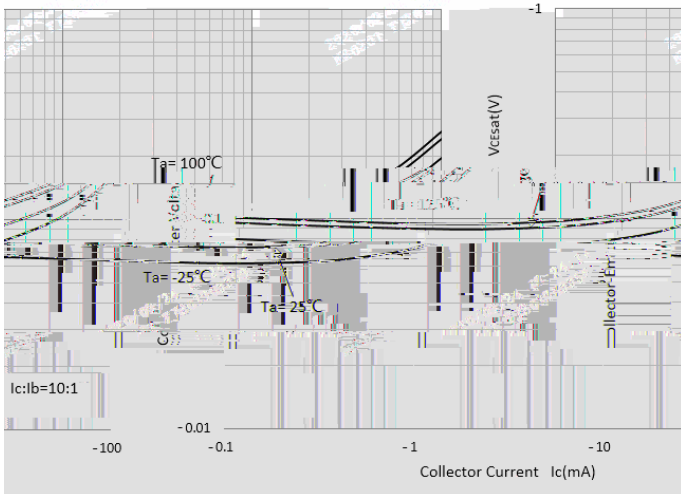
Static Characteristic



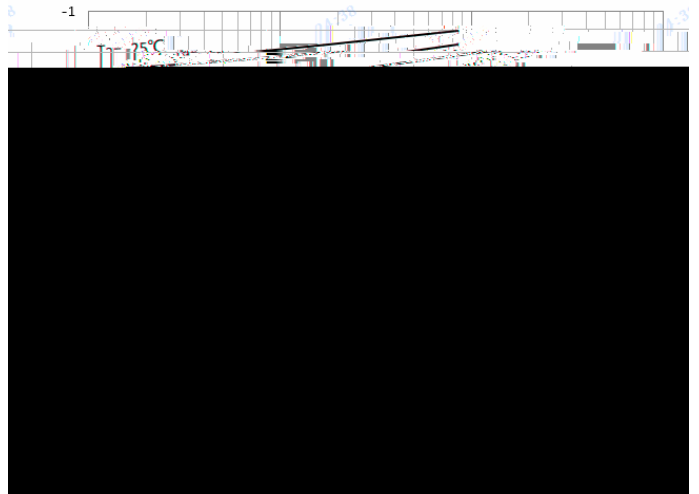
DC Current Gain



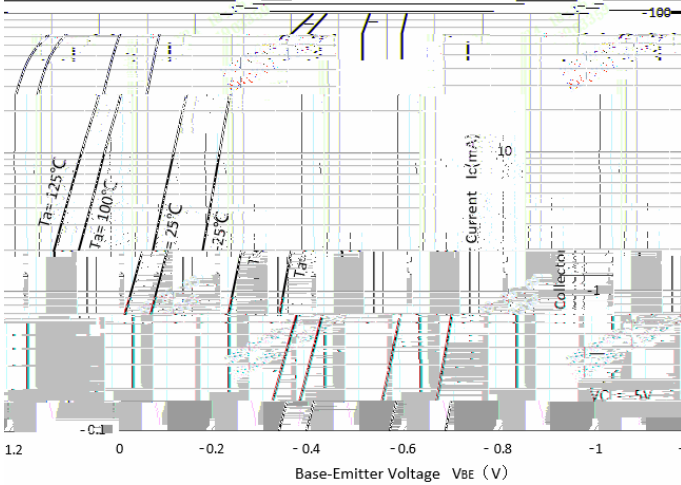
Collector-Emitter Saturation Voltage



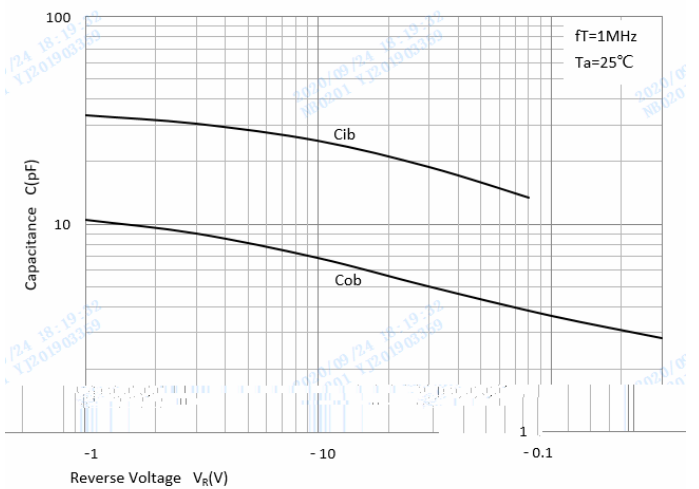
Base-Emitter Saturation Voltage



Base-Emitter On Voltage



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

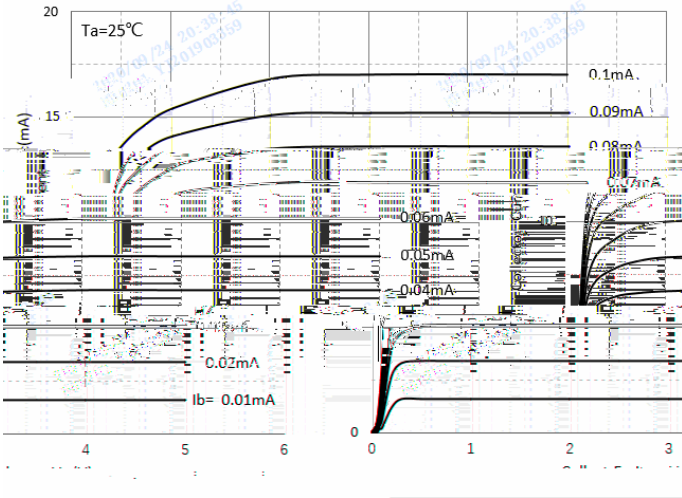




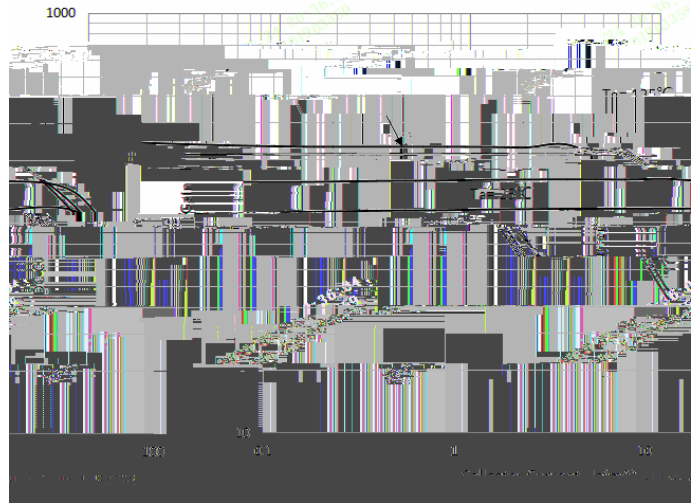
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TR2 NPN Pin1 2 6 Characteristics (Typical)

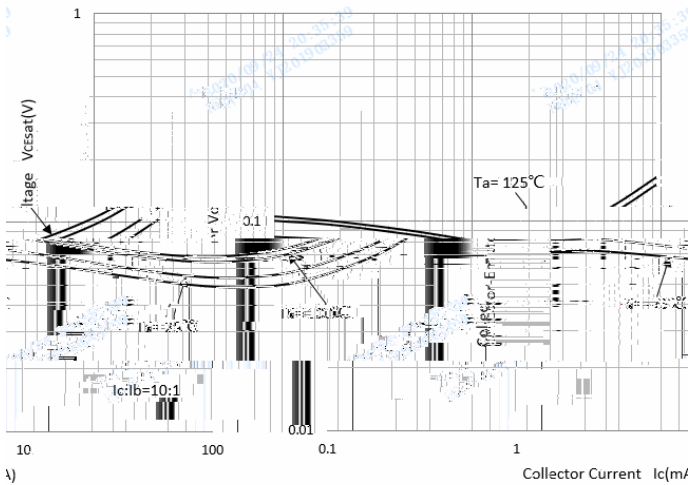
Static Characteristic



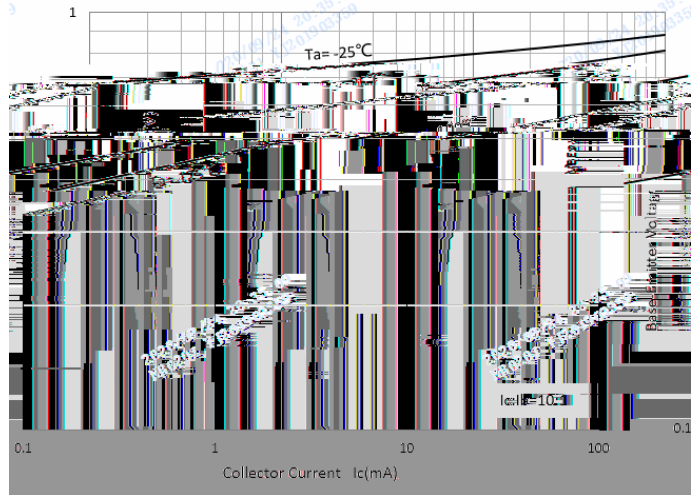
DC Current Gain



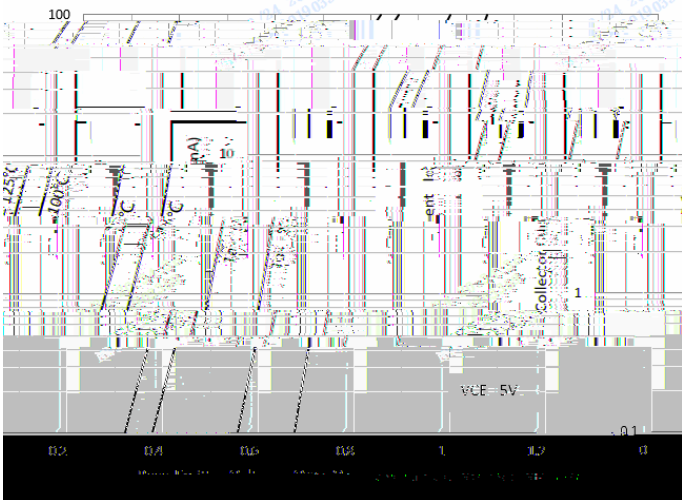
Collector-Emmitter Saturation Voltage



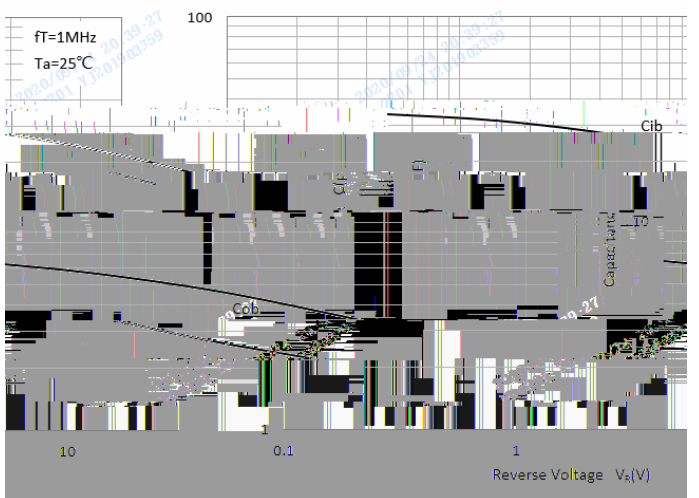
Base-Emmitter Saturation Voltage

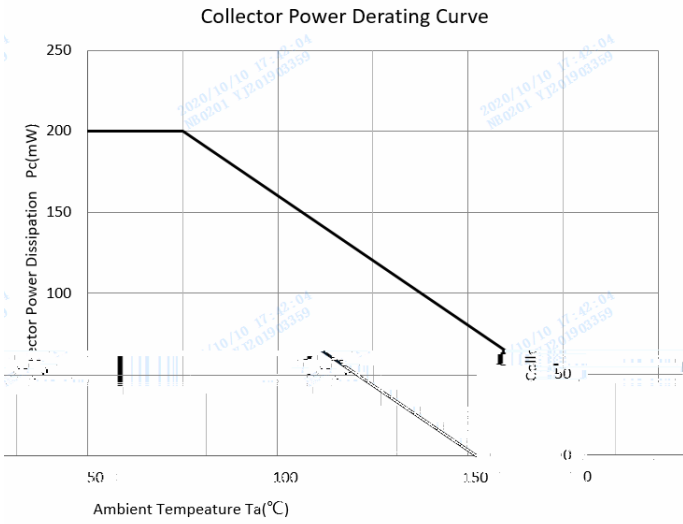


Base-Emmitter On Voltage

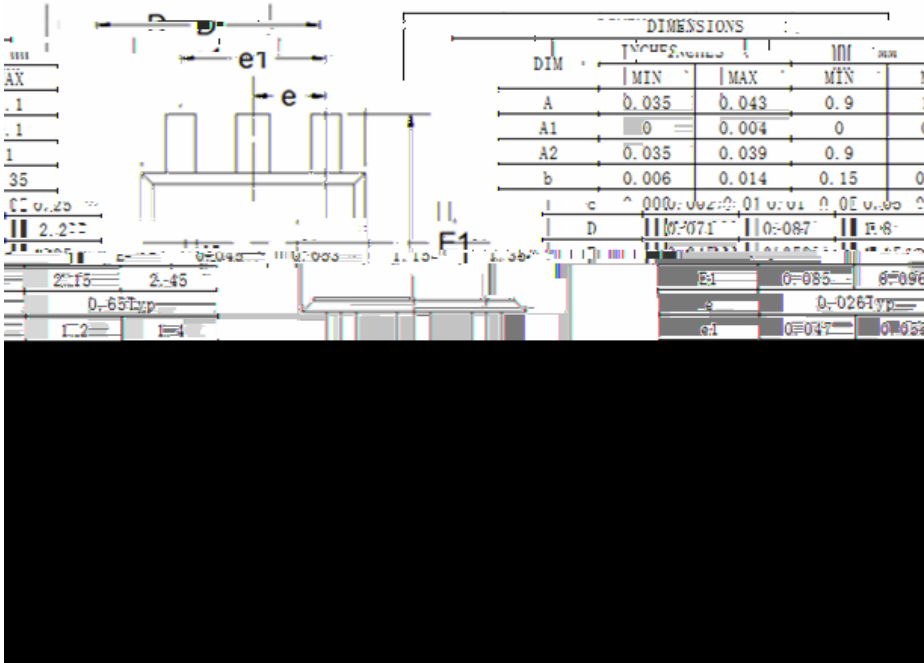


Capacitance

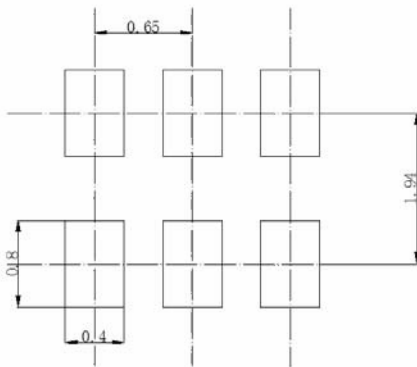




SOT-363 Package Outline Dimensions



SOT-363 Soldering Footprint



Unit mm



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