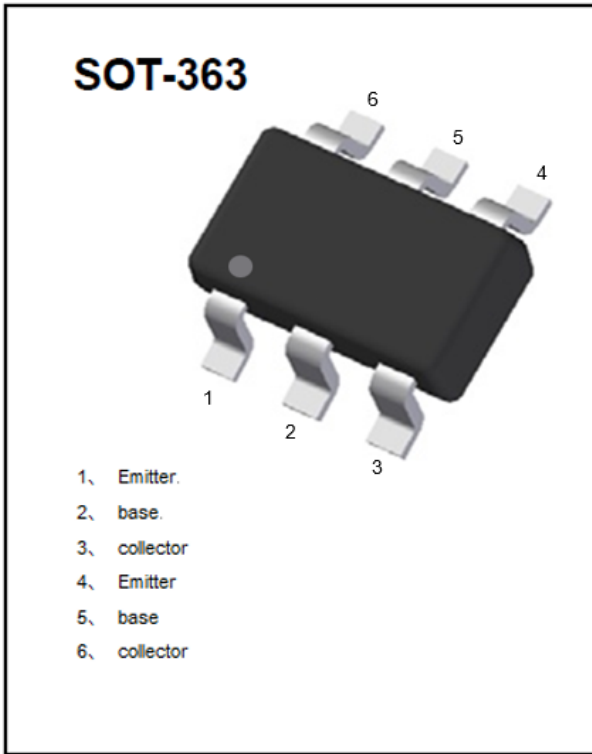


Dual NPN Small Signal Transistor



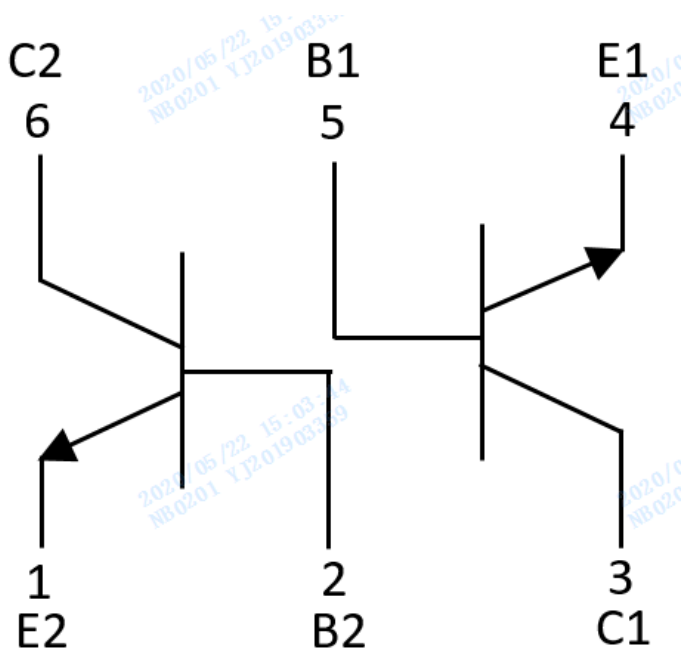
Features

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

Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** K1P

■Equivalent circuit





MMDT2222A

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

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V	IC=10μA,IE=0	75
Collector-Emitter Voltage	VCEO	V	IC=10mA,IB=0	40
Emitter-Base Voltage	VEBO	V	IE=10μA,IC=0	6
Collector Current -Continuous	IC	mA		600
Total Device Dissipation	PC	mW		200
Junction Temperature	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150

■Electrical Characteristics (Ta=25°C unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	VCBO	V	IC=10μA,IE=0	75		
Collector-emitter breakdown voltage	VCEO	V	IC=10mA,IB=0	40		
Emitter-base breakdown voltage	VEBO	V	IE=10μA,IC=0	6		
Collector cut-off current	ICBO	nA	VCB=60V,IE=0			10
Collector cut-off current	ICEX	nA	VCE=60V,VEB(off)=3V			10
Emmitter cut-off current	IEBO	nA	VEB=3V, IC=0			10
Base cut-off Current	IBL	nA	VCE=60V,VEB(off)=3V			20
DC current gain	hFE1		VCE=10V,IC=0.1mA	35		
	hFE2		VCE=10V,IC=1mA	50		
	hFE3		VCE=10V,IC=10mA	75		
	hFE4		VCE=10V,IC=150mA	100		300
	hFE5		VCE=1V,IC=150mA	35		
	hFE6		VCE=10V,IC=500mA	40		
Collector-emitter saturation voltage	VCE(sat)	V	IC=150mA,IB=15mA			0.3
Collector-emitter saturation voltage	VCE(sat)	V	IC=500mA,IB=50mA			1
Base-emitter saturation voltage	VBE(sat)	V	IC=150mA,IB=15mA			1.2
Base-emitter saturation voltage	VBE(sat)	V	IC=500mA,IB=50mA			2
Transition frequency	fT	MHz	VCE=20V,IC=20mA,f=100MHz	300		
Delay time	td	ns	VCC=30V,IC=150mA, IB1=15mA,VBE(off)=-0.5V			10
Rise time	tr	ns				25
Storage time	ts	ns				225
Fall time	tf	ns	IC=150mA, IB1=- IB2=5mA			60



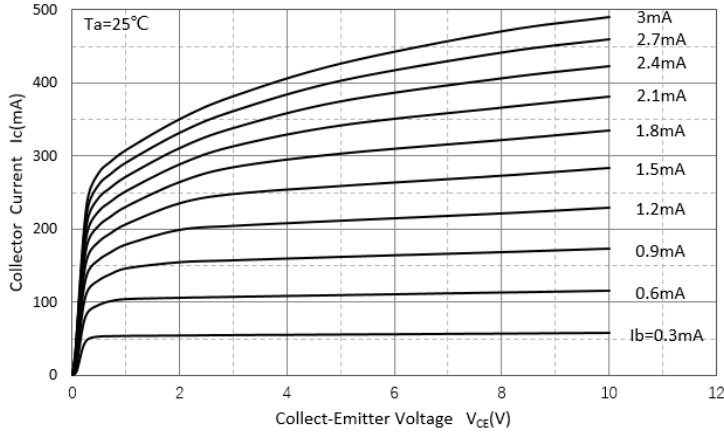
MMDT2222A

Ordering Information (Example)

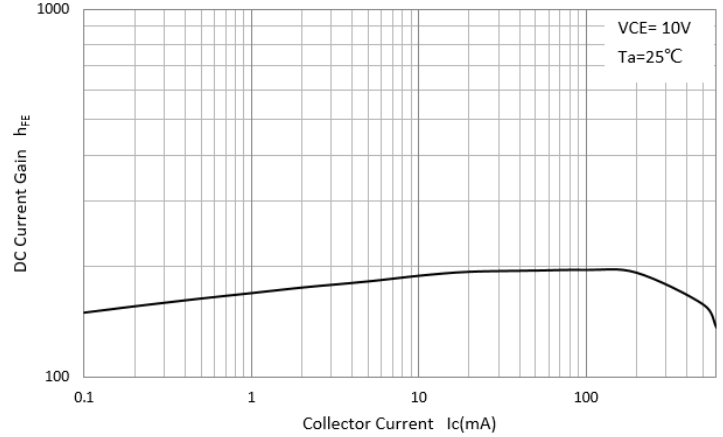
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMDT2222A	F2	Approximate 0.009g	3000	30000	120000	7" reel

Characteristics (Typical)

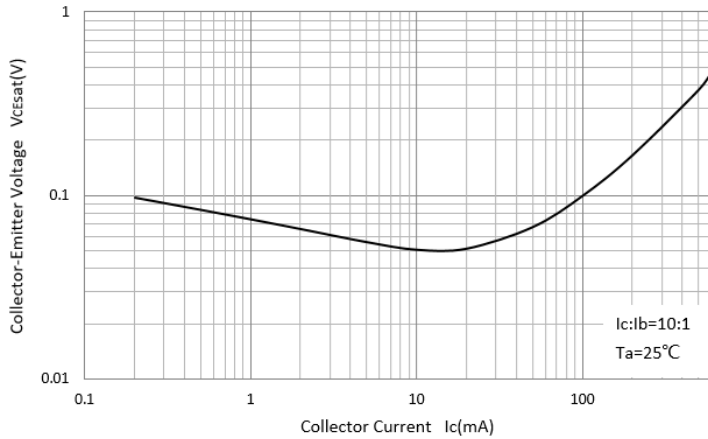
Static Characteristic



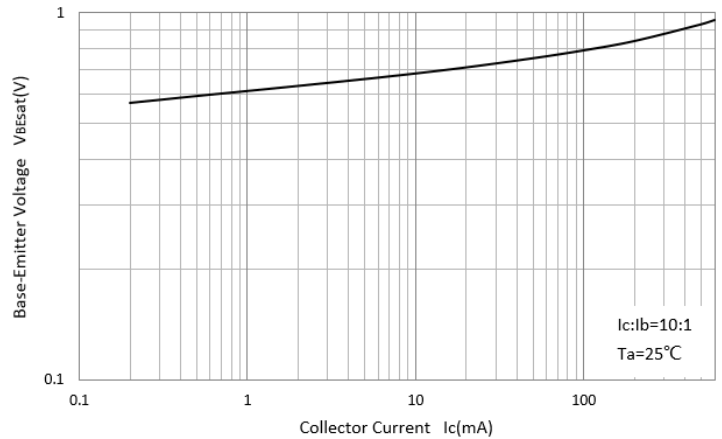
DC Current Gain



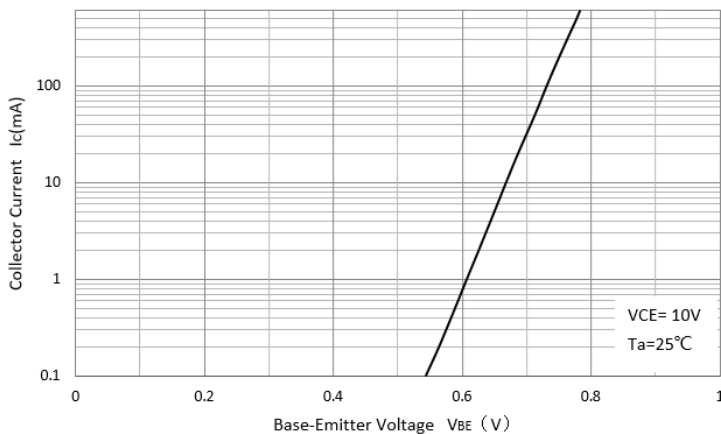
Collector-Emmitter Saturation Voltage



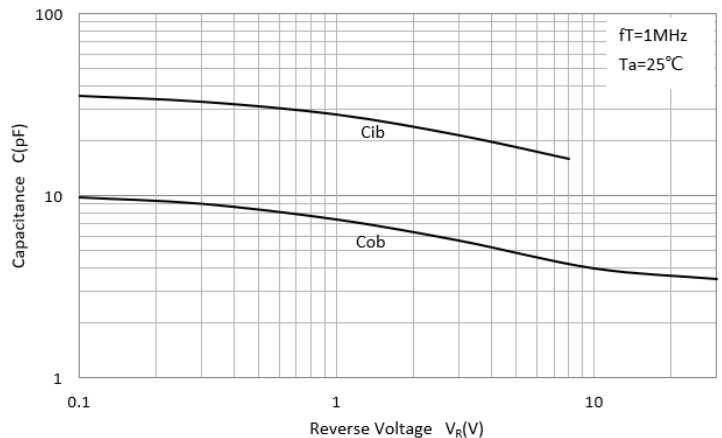
Base-Emmitter Saturation Voltage



Base-Emmitter On Voltage



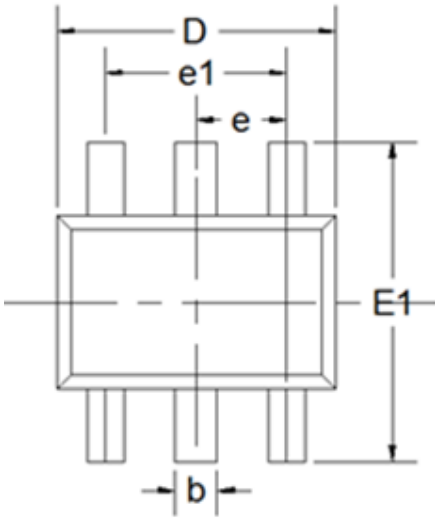
Cob/Cib- V_{cb}/V_{eb}



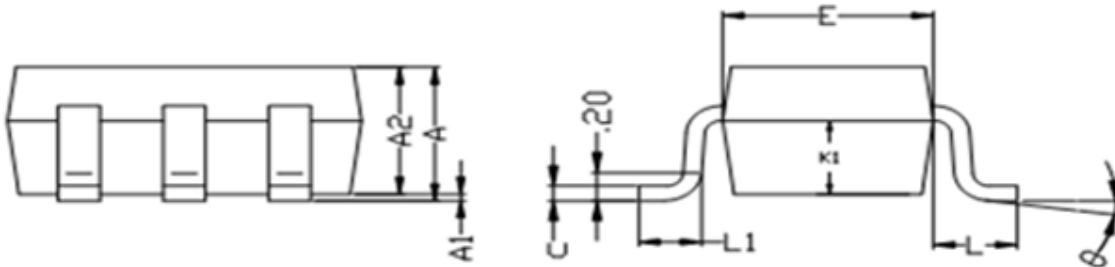


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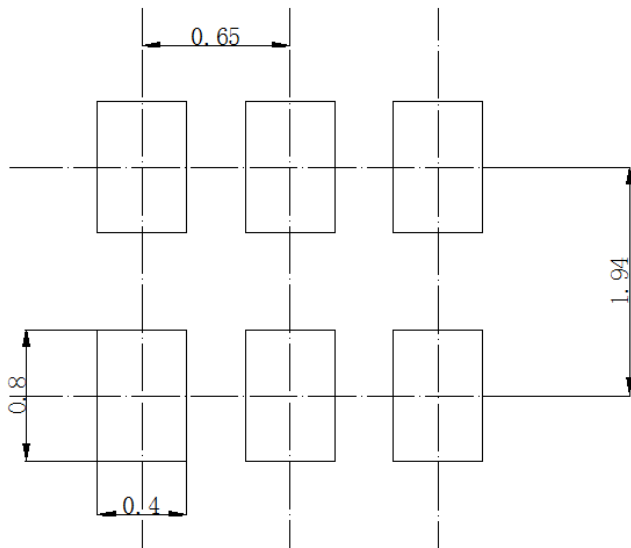
■SOT-363 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.035	0.043	0.9	1.1
A1	0	0.004	0	0.1
A2	0.035	0.039	0.9	1
b	0.006	0.014	0.15	0.35
c	0.002	0.01	0.05	0.25
D	0.071	0.087	1.8	2.2
E	0.045	0.053	1.15	1.35
E1	0.085	0.096	2.15	2.45
e	0.026Typ		0.65Typ	
e1	0.047	0.055	1.2	1.4
L	0.021Typ		0.525Typ	
L1	0.01	0.018	0.26	0.46
φ	0°	8°	0°	8°



■SOT-363 Soldering Footprint



Unit: mm



Disclaimer

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