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SEMICONDUCTOR



ESD



TVS



TSS



MOV

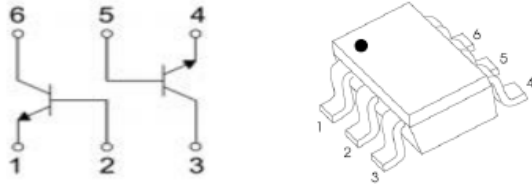


GDT



PLED

Product data sheet



SOT-363

MMDT3052DW (NPN+NPN)
Silicon Epitaxial Planar Transistor

Features

- Each transistor elements are independent

Applications

- For low frequency amplify application

MARKING: 5G

Absolute Maximum Ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V _{CBO}	50	V
Collector Emitter Voltage	V _{CEO}	50	V
Emitter Base Voltage	V _{EBO}	6	V
Collector Current	I _C	200	mA
Power Dissipation	P _{tot}	150	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	- 55 to + 125	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = 6 V, I _C = 0.1 mA at V _{CE} = 6 V, I _C = 1 mA	E	90	-	-	-
	F	120	-	240	-
	F	200	-	400	-
	G	350	-	700	-
Collector Base Cutoff Current at V _{CB} = 50 V	I _{CBO}	-	-	100	nA
Emitter Base Cutoff Current at V _{EB} = 6 V	I _{EBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at I _C = 100 μA	V _{(BR)CEO}	50	-	-	V
Collector Emitter Saturation Voltage at I _C = 100 mA, I _B = 10 mA	V _{CE(sat)}	-	-	0.3	V
Transition Frequency at V _{CE} = 6 V, -I _E = 10 mA	f _T	-	200	-	MHz
Collector Output Capacitance at V _{CB} = 6 V, f = 1 MHz	C _{ob}	-	2.5	-	pF

Electrical Characteristics Curves

Fig 1. Transition Frequency vs Emitter Current

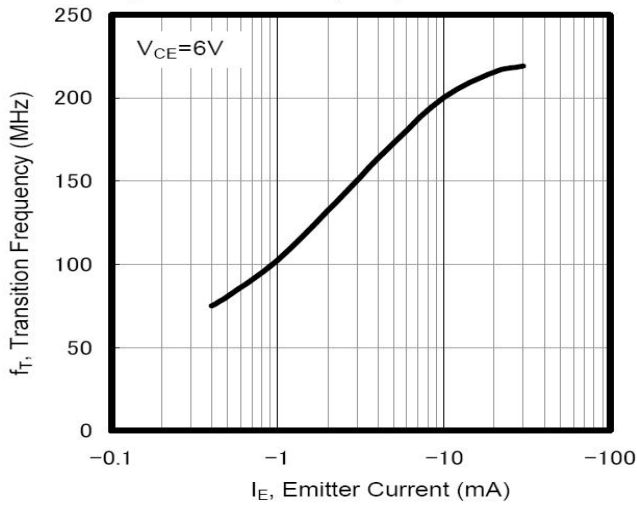


Fig 2. Common Emitter Transfer

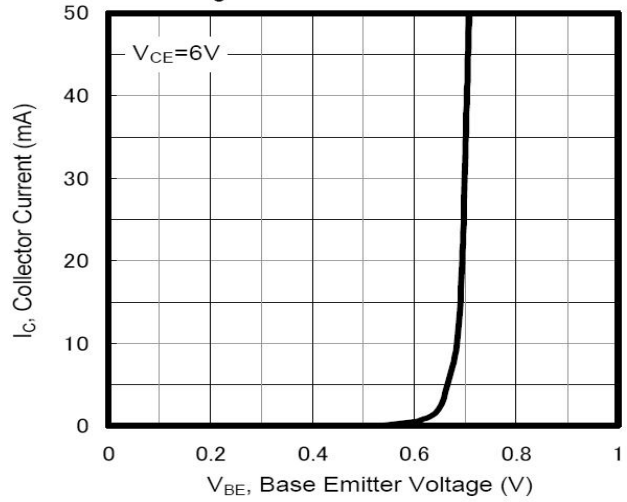


Fig 3. Common Emitter Output

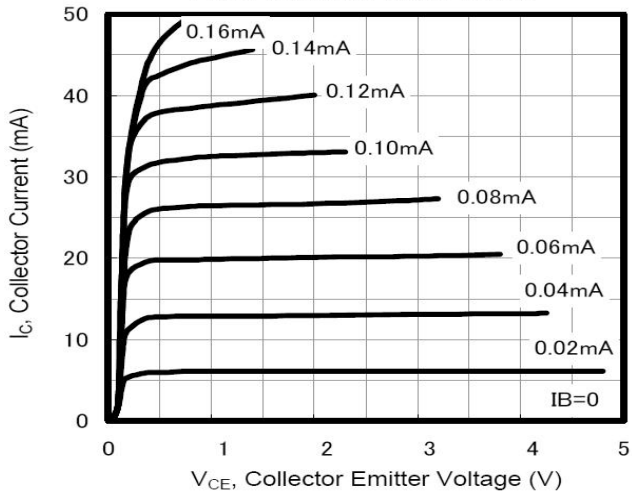


Fig 4. DC Current Gain vs Collector Current

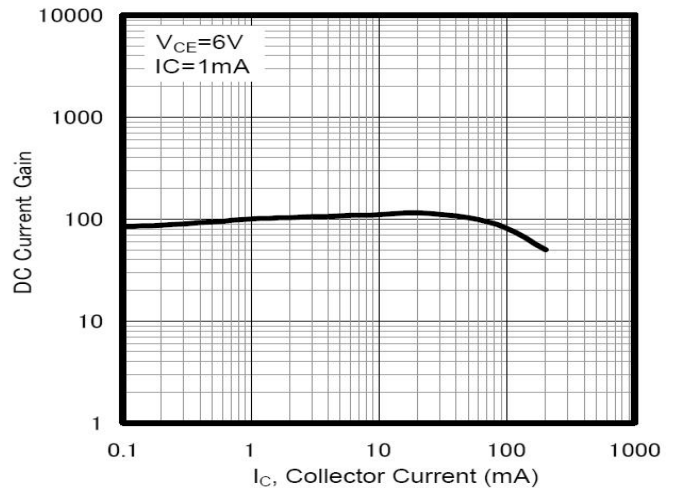
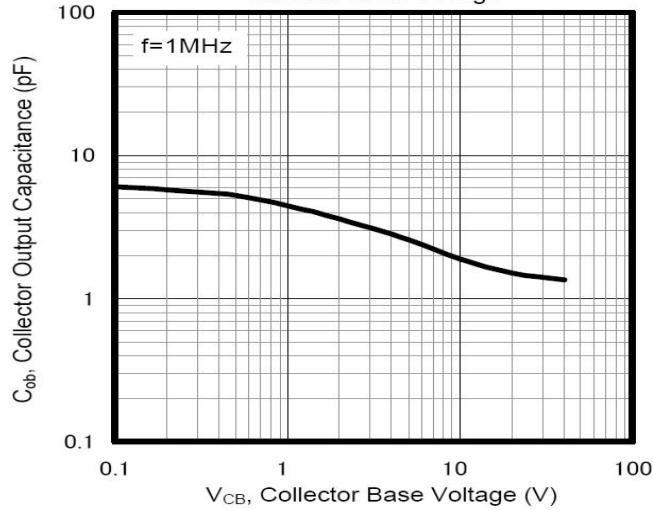
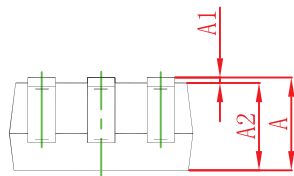
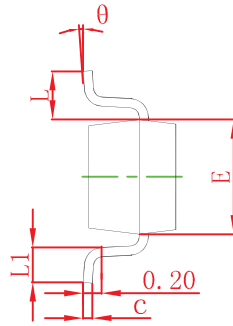
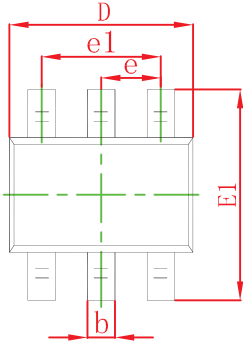


Fig 5. Collector Output Capacitance vs Collector Base Voltage

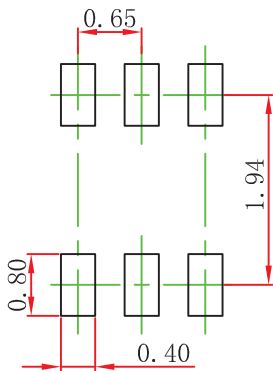


SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
MMDT3052DW	SOT-363	3000

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