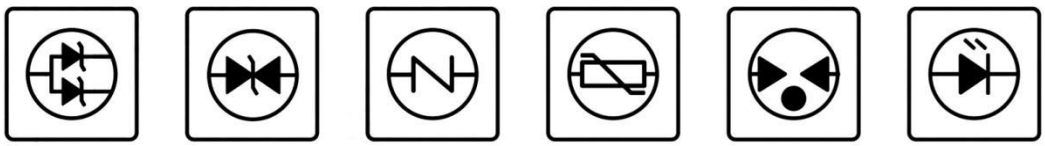
MSKSEMI

SEMICONDUCTOR



Product data sheet

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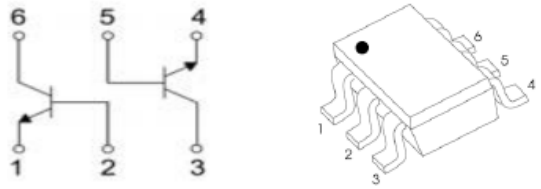


SOT-363

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℃)

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	℃
Storage Temperature Range	T_{stg}	- 55 to + 125	℃

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		h_{FE}	90	-	-	-
at V_{CE} = 6 V, I_C = 1 mA	E	h_{FE}	120	-	240	-
	F	h_{FE}	200	-	400	-
	G	h_{FE}	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

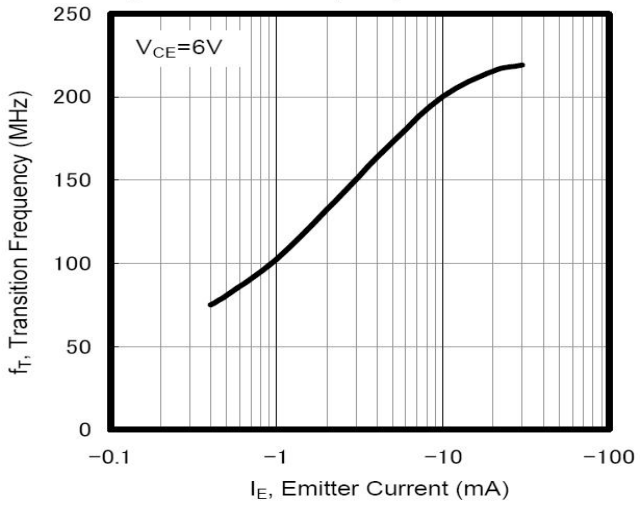


Fig 2. Common Emitter Transfer

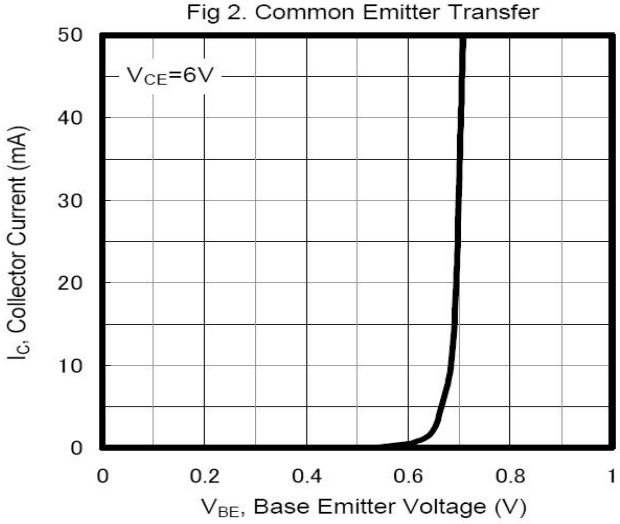


Fig 3. Common Emitter Output

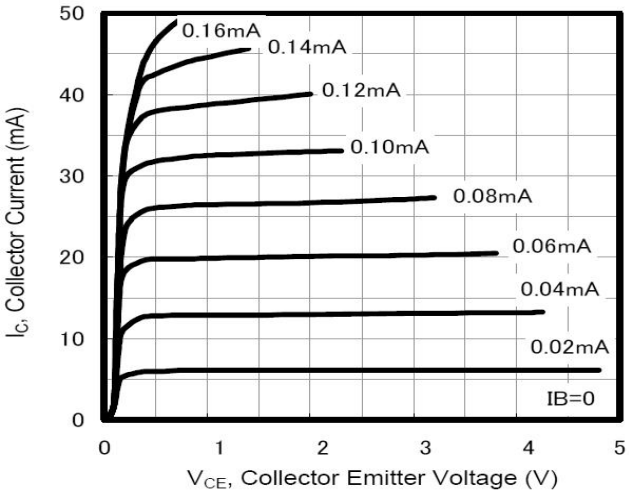


Fig 4. DC Current Gain vs Collector Current

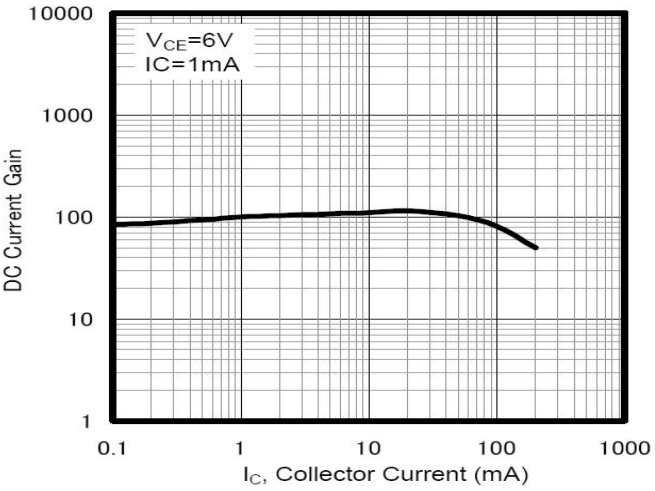
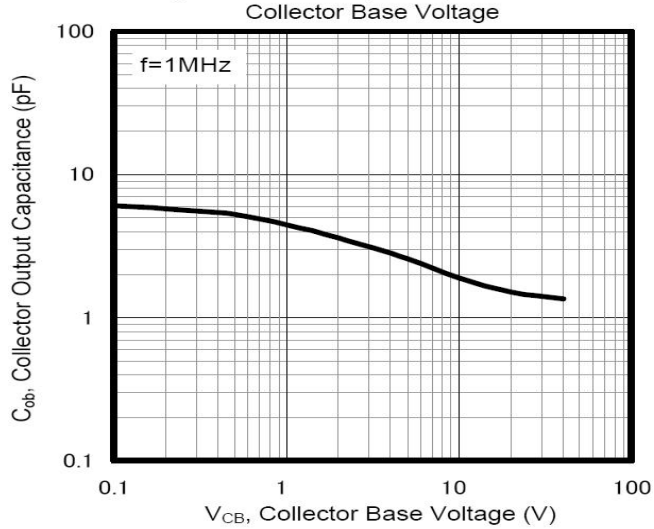
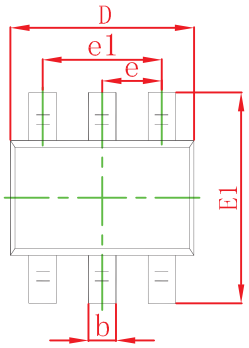
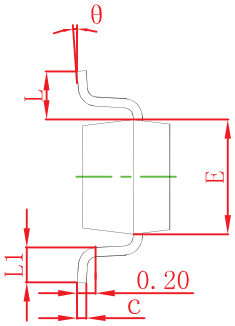


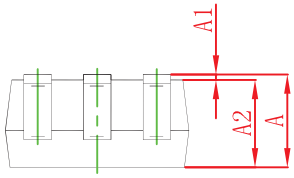
Fig 5. Collector Output Capacitance vs Collector Base Voltage



SOT-363 Package Outline Dimensions

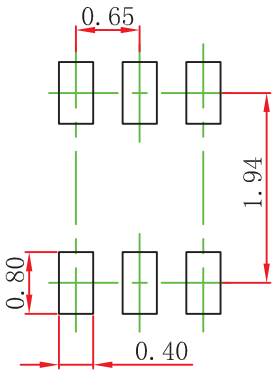






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 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
θ	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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