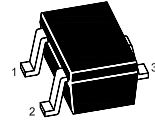


MMBTSC4075W

NPN Silicon Epitaxial Planar Transistor

For switching application.

The transistor is subdivided into four groups, O, Y, G and L, according to its DC current gain.



1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

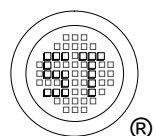
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_{C}	150	mA
Base Current	I_{B}	30	mA
Power Dissipation ¹⁾	P_{tot}	200	mW
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient ¹⁾	$R_{\theta\text{JA}}$	625	$^\circ\text{C/W}$

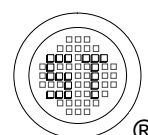
¹⁾ Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



MMBTSC4075W

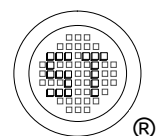
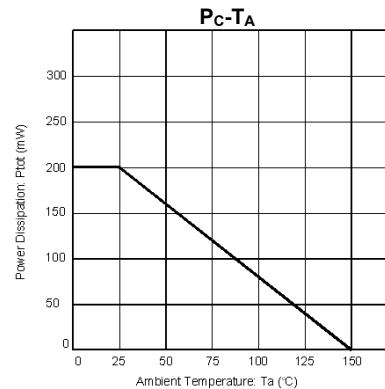
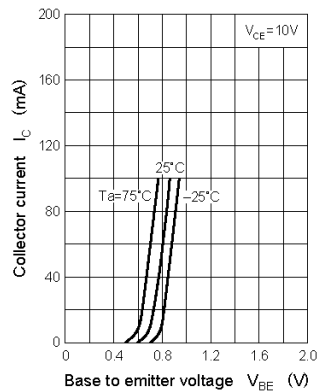
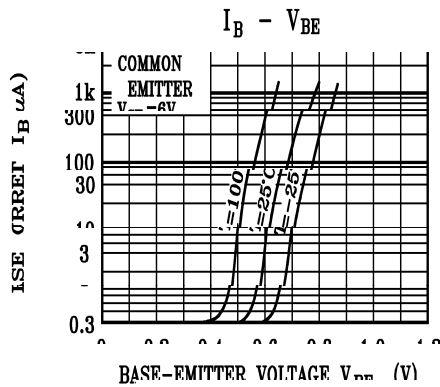
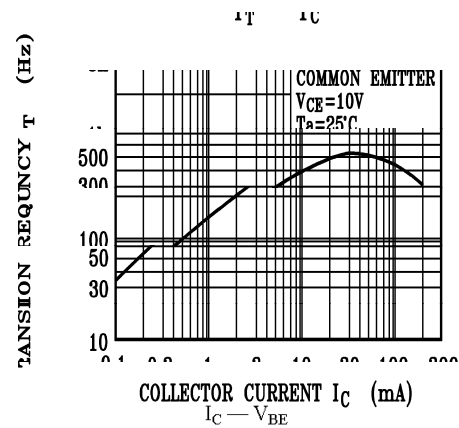
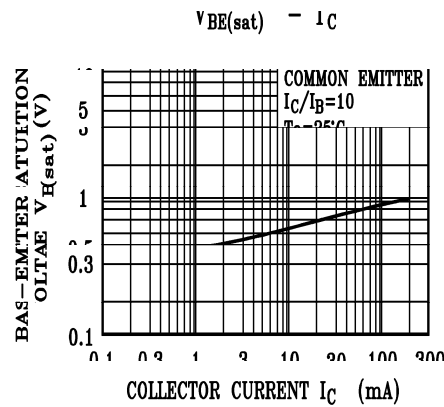
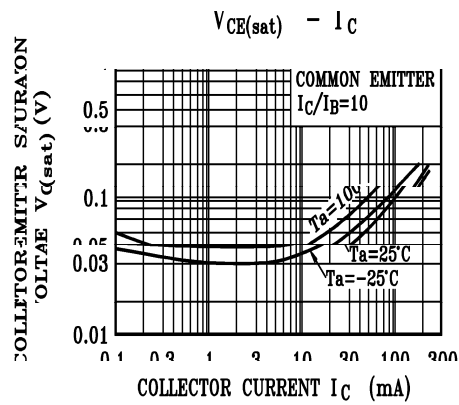
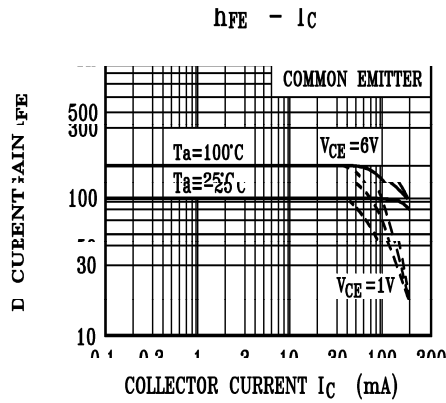
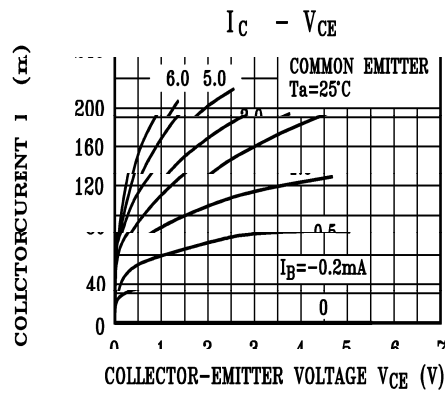
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 6\text{ V}$, $I_C = 2\text{ mA}$ Current Gain Group	O			
	Y			
	G			
	L			
	h_{FE}	70	140	-
	h_{FE}	120	240	-
	h_{FE}	200	400	-
	h_{FE}	350	700	-
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	I_{CBO}	-	0.1	μA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	0.1	μA
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$	$V_{CE(sat)}$	-	0.25	V
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	f_T	80	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	3.5	pF



MMBTSC4075W

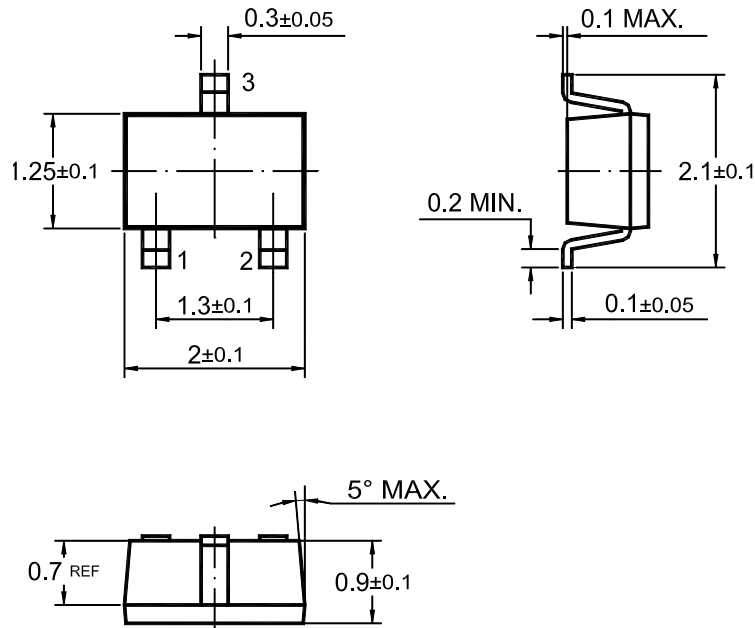
Electrical Characteristics Curves



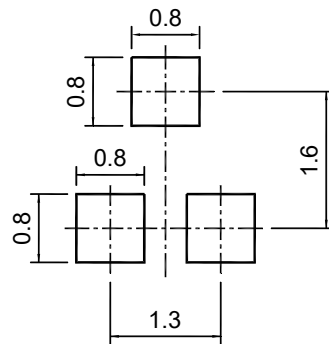
MMBTSC4075W

PACKAGE OUTLINE(Dimensions in mm)

SOT-323



Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" ** " = Part No.

MMBTSC4075YW:1E

MMBTSC4075GW:1F

MMBTSC4075LW:1G

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

