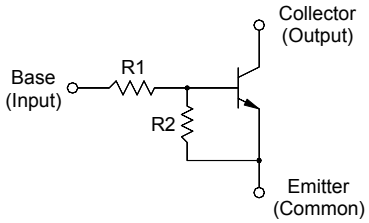
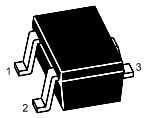
MMDTC114W

NPN Silicon Epitaxial Planar Digital Transistor





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

Resistance Values

Type	R1 (KΩ)	R2 (KΩ)
MMDTC114W	10	47

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 to + 40	V
Collector Current	I_C	100	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 5 mA	h_{FE}	68	-	-	-
Collector Base Cutoff Current at V_{CE} = 50 V	I_{CEO}	-	-	500	nA
Emitter Base Cutoff Current at V_{EB} = 5 V	I_{EBO}	-	-	0.88	mA
Collector Emitter Saturation Voltage at I_C = 5 mA, I_B = 0.25 mA	V_{CEsat}	-	-	0.3	V
Input Off Voltage at V_{CE} = 5 V, I_C = 100 µA	$V_{I(off)}$	0.3	-	-	V
Input On Voltage at V_{CE} = 0.3 V, I_C = 1 mA	$V_{I(on)}$	-	-	1.4	V
Transition Frequency at V_{CE} = 10 V, $-I_E$ = 5 mA, f = 100 MHz	f_T	-	250	-	MHz
Input Resistance	R1	7	10	13	KΩ
Resistance Ratio	R2/R1	3.7	4.7	5.7	-