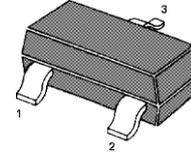


## PNP Silicon Epitaxial Planar Transistor

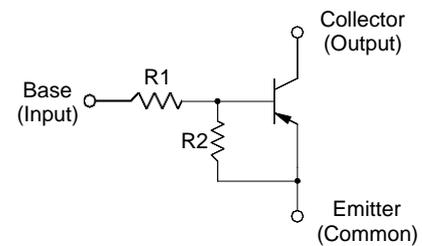
for switching and interface circuit and drive circuit applications

### Resistor Values

Device	Marking	R1 (K)	R2 (K)
MMUN5111W	6A	10	10
MMUN5112W	6B	22	22
MMUN5113W	P5	47	47
MMUN5114W	6D	10	47
MMUN5115W	6E	10	∞
MMUN5116W	6F	4.7	∞
MMUN5130W	6G	1.0	1.0
MMUN5131W	6H	2.2	2.2
MMUN5132W	6J	4.7	4.7
MMUN5133W	6K	4.7	47
MMUN5134W	6L	22	47
MMUN5135W	6M	2.2	47
MMUN5136W	6N	100	100
MMUN5137W	6P	47	22



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



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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Collector Current	$-I_C$	100	mA
Total Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 55 to + 150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

**OFF CHARACTERISTICS**

Emitter- Base Cutoff Current ( $V_{EB} = 6.0\text{ V}$ , $I_C = 0$ )	MMUN5111W MMUN5112W MMUN5113W MMUN5114W MMUN5115W MMUN5116W MMUN5130W MMUN5131W MMUN5132W MMUN5133W	IEBO	-	-	0.5	mAdc
			-	-	0.2	
			-	-	0.1	
			-	-	0.2	
			-	-	0.9	
			-	-	1.9	
			-	-	4.3	
			-	-	2.3	
			-	-	1.5	
			-	-	0.18	

**ON CHARACTERISTICS** (Note 4)

DC Current Gain ( $V_{CE} = 10\text{ V}$ , $I_C = 5.0\text{ mA}$ )	MMUN5111W MMUN5112W MMUN5113W MMUN5114W MMUN5115W MMUN5116W MMUN5130W MMUN5131W MMUN5132W MMUN5133W	FE	35 60 80 80 160 160 3.0 8.0 15 80	60 100 140 140 250 250 5.0 15 27 140	250 - - - - - - - - -	
Output Voltage (on) ( $V_{CC} = 5.0\text{ V}$ , $V_B = 2.5\text{ V}$ , $R_L = 1.0\text{ k}\Omega$ )	MMUN5111W MMUN5112W MMUN5114W MMUN5115W MMUN5116W MMUN5130W MMUN5131W MMUN5132W MMUN5133W MMUN5134W	VOL	- - - - - - - - - -	- - - - - - - - - -	0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	Vdc

4. Pulse Test: Pulse Width < 300  $\mu\text{s}$ , Duty Cycle < 2.0%

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted) (Continued)

Output Voltage (off) ( $V_{CC} = 5.0\text{ V}$ , $V_B = 0.5\text{ V}$ , $R_L = 1.0\text{ k}\Omega$ ) ( $V_{CC} = 5.0\text{ V}$ , $V_B = 0.050\text{ V}$ , $R_L = 1.0\text{ k}\Omega$ )		$V_{OH}$	4.9	–	–	Vdc
Input Resistor	MMUN5111W MMUN5112W MMUN5113W MMUN5114W MMUN5115W MMUN5116W MMUN5130W MMUN5131W MMUN5132W MMUN5133W	R1	7.0 15.4 32.9 7.0 7.0 3.3 0.7 1.5 3.3 3.3	10 22 47 10 10 4.7 1.0 2.2 4.7 4.7	13 28.6 61.1 13 13 6.1 1.3 2.9 6.1 6.1	$\Omega$
Resistor Ratio	MMUN5111W/MMUN5112W/MMUN5113W/ MMUN5136W MMUN5114W MMUN5115W/MMUN5116W MMUN5130W/MMUN5131W/MMUN5132W	R1/R2	0.8 0.17 – 0.8	1.0 0.21 – 1.0	1.2 0.25 – 1.2	

### Characteristic Curves

