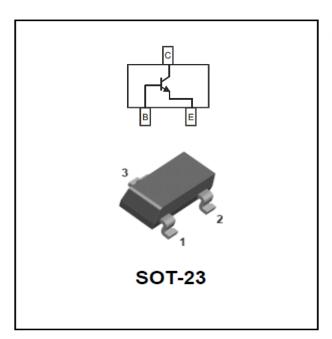




# **NPN General Purpose Amplifier**



#### **Features**

- •Epoxy meets UL-94 V-0 flammability rating
- •Moisure Sensitivity Level 1
- •Marking:G1

**■**Maximum Rantings (Ta=25°C)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage*	V <sub>CEO</sub>	V	I <sub>C</sub> =1.0mAdc, I <sub>B</sub> =0	160
Collector-Base Voltage	V <sub>CBO</sub>	V	I <sub>C</sub> =100uAdc, I <sub>E</sub> =0	180
Emitter-Base Voltage	V <sub>EBO</sub>	V	I <sub>E</sub> =10uAdc, I <sub>C</sub> =0	6.0
Collector Current	Ic	mA		600
Power Dissipation	P <sub>D</sub>	mW		300
Operation Junction Temperature	TJ	$^{\circ}$ C		-55 to +150
Storage Temperature	T <sub>STG</sub>	$^{\circ}$ C		-55 to +150





**■Electrical Characteristics** (Ta=25°C)

Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage*	$V_{CEO}$	V	I <sub>C</sub> =1.0mAdc, I <sub>B</sub> =0	160	
Collector-Base Voltage	V <sub>CBO</sub>	V	I <sub>C</sub> =100uAdc, I <sub>E</sub> =0	180	
Emitter-Base Voltage	V <sub>EBO</sub>	V	I <sub>E</sub> =10uAdc, I <sub>C</sub> =0	6.0	
Collector Cutoff Current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =120Vdc		50
Collector Cutoff Current	I <sub>EB0</sub>	nA	V <sub>CE</sub> =4.0Vdc		50
			I <sub>C</sub> =1.0mA V <sub>CE</sub> =5.0Vdc	80	
DC Current Gain	h <sub>FE</sub>		I <sub>C</sub> =10mA V <sub>CE</sub> =5.0Vdc	100	300
			I <sub>C</sub> =50mA V <sub>CE</sub> =5.0Vdc	50	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I <sub>C</sub> =50mA I <sub>B</sub> =5.0mA		0.2
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	I <sub>C</sub> =50mA I <sub>B</sub> =5.0mA		1.0

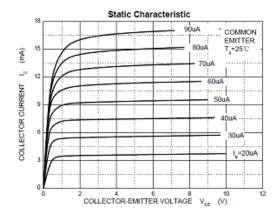
**■Small-signal Characteristics** (Ta=25°C)

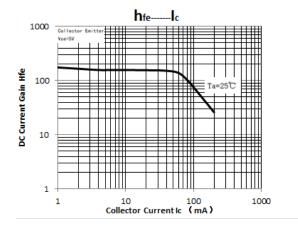
Item	Symbol	Unit	Conditions	Min	Max
Current Gain-Bandwidth Product	f⊤	MHz	I <sub>C</sub> =10mAdc, V <sub>CE</sub> =5.0Vdc,f=30MHz	100	300

#### **■**Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT5551	F2	Approximate 0.008	3000	30000	120000	7" reel

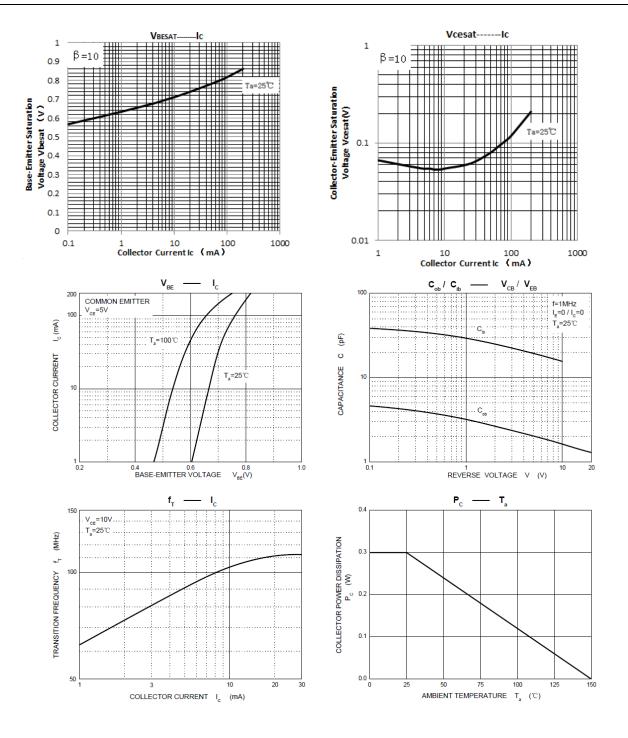
### **■**Characteristics(Typical)





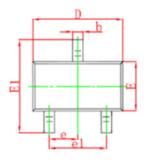


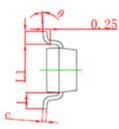


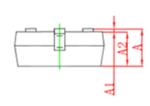




## ■SOT-23 Package Outline Dimensions

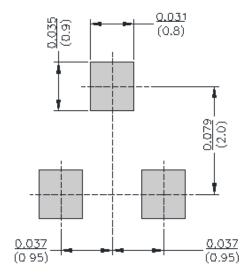






Symbol -	Dimensions In	Millimeters	Dimensions In Inches			
	Min	Max	Min	Max		
A	0. 900	1. 150	0.035	0.045		
A1	0.000	0. 100	0.000	0.004		
A2	0. 900	1. 050 0. 035		0.041		
b	0.300	0.500	0.012	0.020		
с	0. 100	0. 200	0.004	0.008		
D	2.800	3.000	0. 110	0.118		
Е	1. 200	1. 400	0.047	0.055		
E1	2. 250	2. 550	0.089	0.100		
e	0. 95	OTYP	0. 037TYP			
el	1. 800	2.000	0.071	0. 079		
L	0.55	OREF	0.02	0. 022REF		
L1	0.300	0. 500	0.012	0.020		
θ	0°	8°	0°	8°		

## ■SOT-23Suggested Pad Layout





#### **MMBT5551**

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