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# MMBT5551

## NPN Plastic Encapsulate Transistor

### Features

- Collector Current:  $I_{CM}=0.6A$
- Collector-Base Voltage:  $V_{(BR)CBO}=180V$
- Operating And Storage Temperatures  $-55^{\circ}C$  to  $150^{\circ}C$
- Capable of 0.3Watts of Power Dissipation
- Device Marking: MMBT5551=G1

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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#### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emmitter Breakdown Voltage ( $I_C=1.0mA$ , $I_B=0$ )	160	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A$ , $I_E=0$ )	180	---	Vdc
$V_{(BR)EBO}$	Emmitter-Base Breakdown Voltage ( $I_E=10\mu A$ , $I_C=0$ )	6.0	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=120Vdc$ , $I_E=0$ )	---	0.1	$\mu A$
$I_{EBO}$	Emmitter Cutoff Current ( $V_{EB}=4.0Vdc$ , $I_C=0$ )	---	0.1	$\mu A$

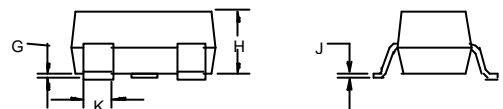
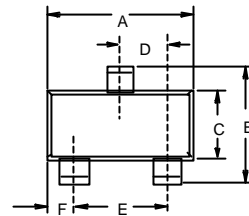
#### ON CHARACTERISTICS

$h_{FE-1}$	DC Current Gain ( $V_{CE}=5.0Vdc$ , $I_C=1.0mA$ )	80	---	---
$h_{FE-2}$	DC Current Gain ( $V_{CE}=5.0Vdc$ , $I_C=10mA$ )	100	200	---
$h_{FE-3}$	DC Current Gain ( $V_{CE}=5.0Vdc$ , $I_C=50mA$ )	50	---	---
$V_{CE(sat)}$	Collector-Emmitter Saturation Voltage ( $I_C=50mA$ , $I_B=5.0mA$ )	---	0.5	Vdc
$V_{BE(sat)}$	Base-Emmitter Saturation Voltage ( $I_C=50mA$ , $I_B=5.0mA$ )	---	1.0	Vdc

#### SMALL-SIGNAL CHARACTERISTICS

$f_T$	Current Gain-Bandwidth Product ( $I_C=10mA$ , $V_{CE}=5.0Vdc$ , $f=30MHz$ )	100	---	MHz
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### SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

### Suggested Solder Pad Layout

