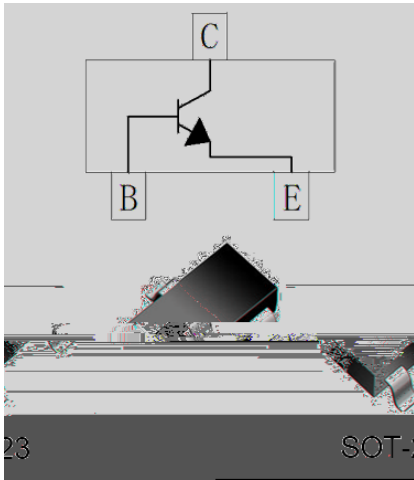


NPN General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- High Voltage Transistors NPN Silicon
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Linear amplification

Mechanical Data

Case: SOT-23

Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

Marking: G1

Maximum Ratings (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V		180
Collector-Emitter Voltage	V_{CEO}	V		160
Emitter-Base Voltage	V_{EBO}	V		6.0
Collector Current -Continuous	I_C	mA		600
Total Device Dissipation (*)	P_D	mW		300
Thermal Resistance From Junction To Ambient (*)	R_{JA}	/W		4 Å M

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(*) Device mounted on FR-4 PCB 1.0 x 1.0 x 0.06 inch.



MMBT5551Q

Electrical Characteristics (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C=100\mu A, I_E=0$	180	
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C=1.0mA, I_B=0$	160	
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E=10\mu A, I_C=0$	6.0	
Collector cut-off current	I_{CBO}	nA	$V_{CB}=120V, I_E=0$		50
Emitter cut-off current	I_{EBO}	nA	$V_{EB}=4.0V, I_C=0$		50
DC current gain	h_{FE}		$V_{CE}=5.0V, I_C=1.0mA$	80	
	h_{FE}		$V_{CE}=5.0V, I_C=10mA$	100	300
	h_{FE}		$V_{CE}=5.0V, I_C=50mA$	50	
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=50mA, I_B=5.0mA$		0.2
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=50mA, I_B=5.0mA$		1.0

Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	f_T	MHz	$V_{CE}=5.0Vdc, I_C=10mA, f=30MHz$	100	300

Ordering Information (Example)

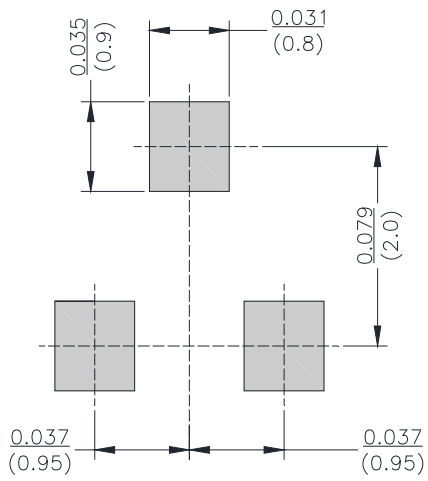
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT5551Q	F2	Approximate 0.01	3000	30000	120000	7" reel

Characteristics (Typical)

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SOT-23 Suggested Pad Layout



Unit: $\frac{\text{inch}}{\text{mm}}$



MMBT5551Q

Disclaimer

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