NPN General Purpose Amplifier

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- High Conductance
- Low $V_{CE(sat)}$
- Part no. with suffix “Q” means AEC-Q101 qualified

Applications

- NPN General Purpose Amplifier

Mechanical Data

- Case: SOT-23
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: AJR

■ Maximum Ratings (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Value
Collector-Base Voltage	V_{CBO}	V	80
Collector-Emitter Voltage	V_{CEO}	V	80
Emitter-Base Voltage	V_{EBO}	V	5
Collector Current -Continuous	I_C	mA	500
Total Device Dissipation	P_D	mW	200
Junction Temperature	T_j	-	-55 to +150
Storage Temperature	T_{STG}	-	-55 to +150

■ Electrical Chau (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	I_C= 50uA, I_E=0	80		
Collector-emitter breakdown voltage	V_{CEO}	V	I_C= 2mA, I_B=0	80		
Emitter-base breakdown voltage	V_{EBO}	V	I_E= 50uA, I_C=0	5		
Collector-base cut-off current	I_{CBO}	uA	V_{CB}=50V, I_E =0			0.5
Emitter-base cut-off current	I_{EBO}	uA	V_{EB}=4 V , I_C=0			0.5
DC current gain	h_{FE}		V_{CE}= 3V, I_C= 100mA	180		390
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	I_C=500mA, I_B= 50mA			0.5
Base-emitter saturation voltage	$V_{BE(sat)}$	V	I_C=500mA, I_B= 50mA			1.2

2SD1782-RQ

■SOT-23 Package Outline Dimensions

	MIN	MAX	MIN	MAX
A	0.035	0.045	0.90	1.15
A1	0.000	0.004	0.00	0.10
A2	0.035	0.041	0.90	1.05