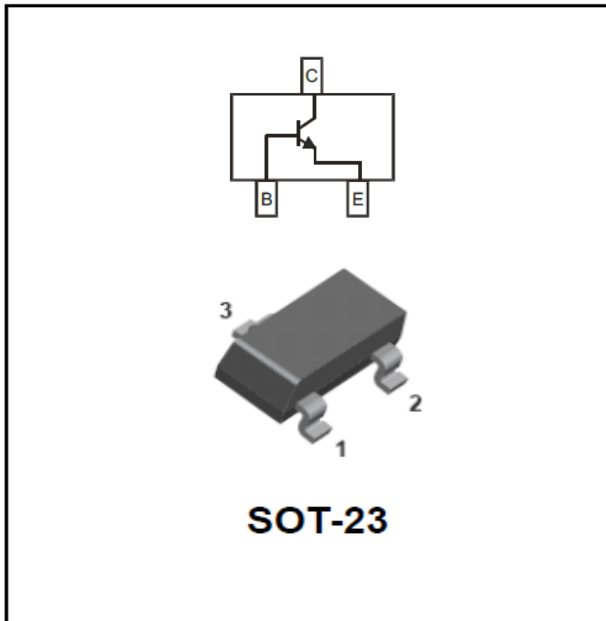


NPN General Purpose Amplifier



Features

- Low collector-emitter saturation voltage
- High Conductance
- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1

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°C)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	V_{CEO}	V	$I_C=2mA, I_B=0$	80
Collector-Base Voltage	V_{CBO}	V	$I_C=50\mu A, I_E=0$	80
Emitter-Base Voltage	V_{EBO}	V	$I_E=50\mu A, I_C=0$	5
Collector Current	I_C	mA		500
Collector Power Dissipation	P_C	mW		200
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W		625
Operation Junction Temperature	T_j	°C		150
Storage Temperature	T_{stg}	°C		-55 to +150

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SD1782-R	F2	Approximate 0.008	3000	30000	120000	7" reel

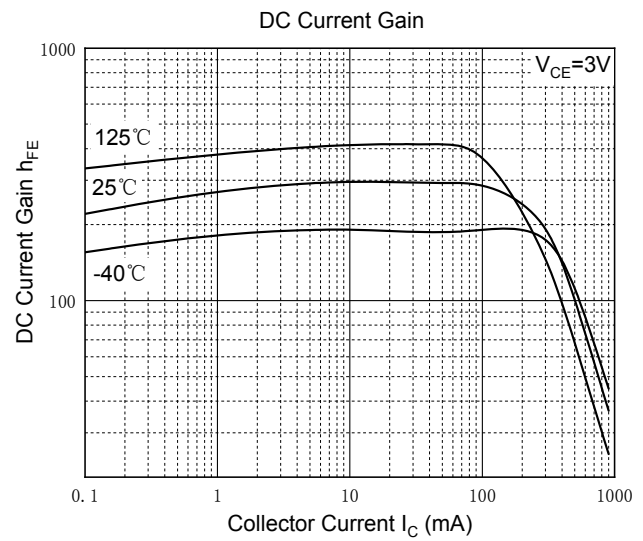
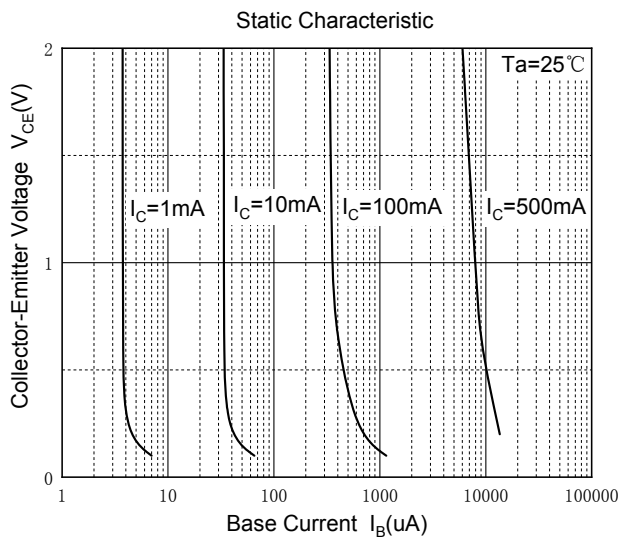


2SD1782-R

■Electrical Characteristics (Ta=25°C)

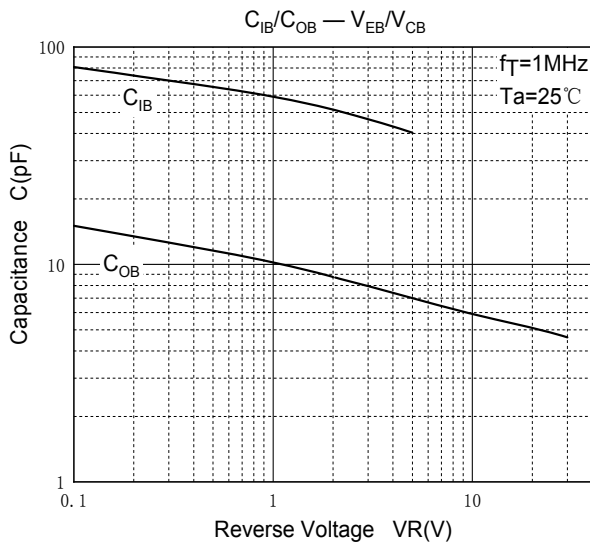
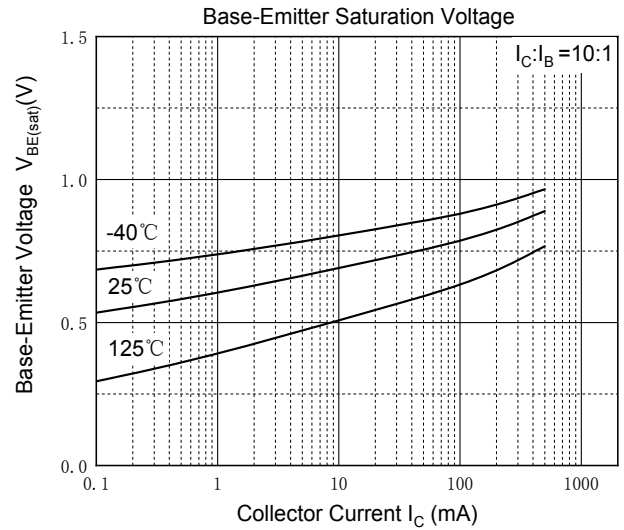
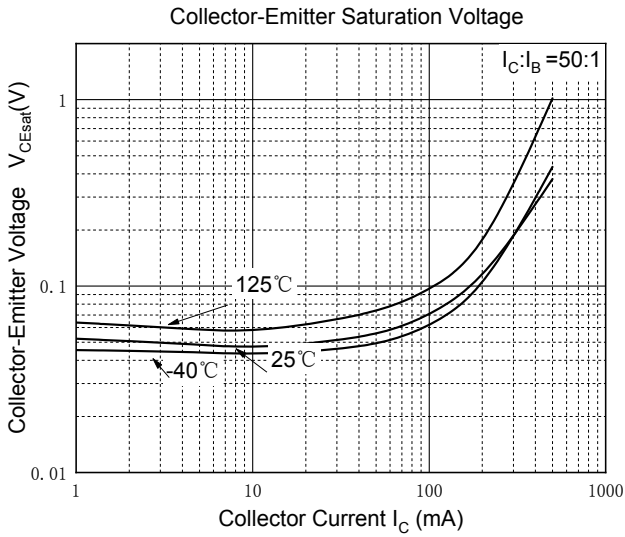
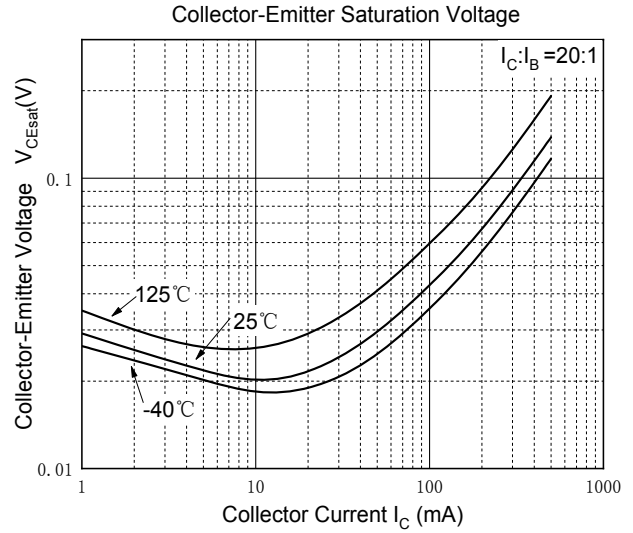
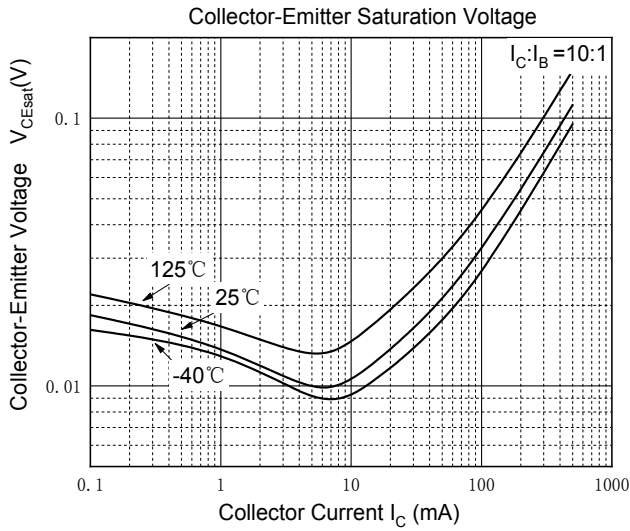
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CE0}	V	$I_C=2mA, I_B=0$	80		
Collector-Base Voltage	V_{CBO}	V	$I_C=50\mu A, I_E=0$	80		
Emitter-Base Voltage	V_{EBO}	V	$I_E=50\mu A, I_C=0$	5		
Collector-base Cutoff Current	I_{CBO}	μA	$V_{CB}=50V$			0.5
Base-emitter Cutoff Current	I_{EBO}	μA	$V_{EB}=4V$			0.5
DC Current Gain	h_{FE}		$I_C=100mA, V_{CE}=3V$	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
Transition frequency	f_T	MHz	$I_C=50mA, V_{CE}=10V, f=100MHz$		180	

■Characteristics(Typical)





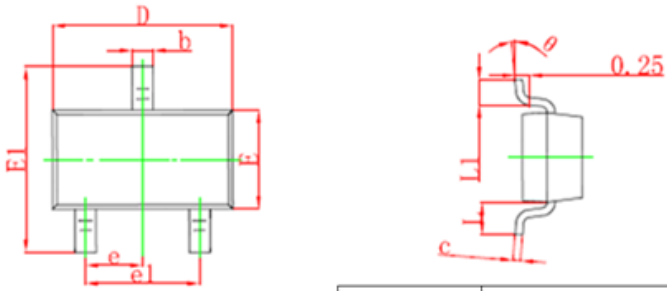
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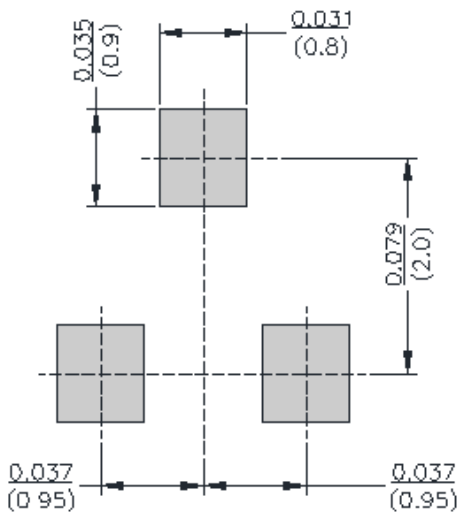
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■SOT23 Package Outline Dimensions



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
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■SOT23 Soldering Footprint





2SD1782-R

Disclaimer

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